GUIDO
BONATTI

Liber Astronomiae Part I

Translated
by Robert Zoller
Edited
by Robert Hand

Project Hindsight
Latin Track
Volume VII

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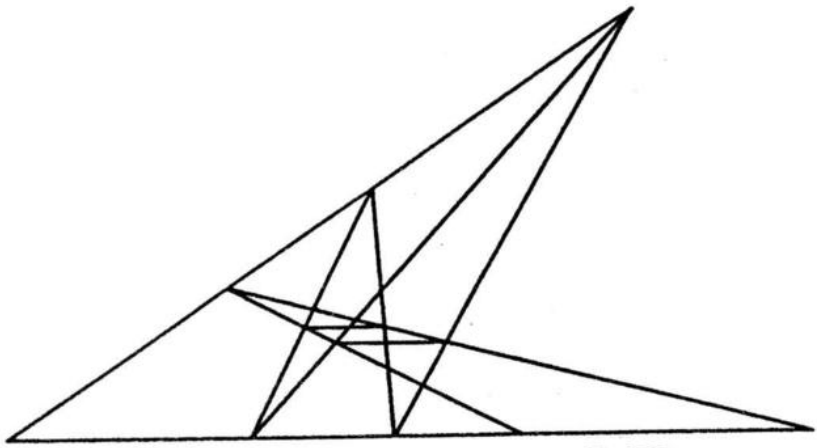

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Introduction to Guido Bonatti
by
Robert Hand

With this booklet the Project Hindsight Latin Track begins its most ambitious project to date, the first complete English translation of Guido Bonatti's *Liber Astronomiae,* one of the longest and most comprehensive introductions to astrology ever written. We have not reached a perfect estimate of how many booklets this translation will take up, but it is clear that this translation will take more than a dozen of our booklets and could comprise an entire twelve issue set or more by itself. It is not our intention to drop all of our other translations in the Latin Track. The translations of the *Liber Astronomiae* will be interspersed among our other translations until it is completed. However, the reader who is not familiar with Bonatti might well be moved to ask if it is fitting to devote such an effort to a single work. The answer is unequivocally yes!

The *Liber Astronomiae*, a work which goes by a number of titles,[1] is probably the most important single astrological work written in the Western tradition between Ptolemy and the Renaissance. It is not an original or ground-breaking work, but it is a nearly complete and exhaustive compilation of the Western astrological tradition as it was at a particular point in history, the point just after astrology had been restored to Europe from the Moslem Near East. Bonatti's work is a summation of the ideas, methods, and techniques of virtually every major Arabic astrologer of the Middles Ages, and the earlier astrologers whose ideas had survived into the Middle Ages.

Bonatti, himself, was not a mere compiler. Even while he summarized all of the methods with which he was familiar, he also reviewed them critically based on his own, extensive experience. As Robert Zoller points out in his Translator's Preface, if Bonatti were not a practically skilled Medieval astrologer, his work would be of less interest even given its scope; but in fact he was, as far as we can tell,

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[1] We have chosen to use this particular title, but in fact the work is referred to by a number of titles, the most common of which is *Liber Astronomicus*. However, since it is the only book by Guido Bonatti, any reference to a work by Bonatti is a reference to this work. See also page xv, note 1.

a highly skilled astrologer. As the translations unfold the reader will be treated to examples of his acumen, especially in the astrology of war, a field of activity not open to modern astrologers!

Bonatti's work is also unique among almost all other astrological works in that he seems to be telling us virtually everything he knew, insofar as it can be contained within a book. We have commentary and description on virtually every aspect of practical Medieval astrology, complete with examples, not perhaps as many examples as we might want, but certainly enough to give us an adequate idea of his methods. The *Liber Astronomiae* is appropriate as a text for persons all the way from the relatively inexperienced to the most advanced astrological student. In fact one of the more curious criticisms that was leveled at the book in its own day was that Bonatti had made astrology so clear that even a housewife[1] could learn it. This of course assumes that one was dealing with a housewife who could read Latin! Such "housewives" were indeed rare.

As Zoller points out in his preface, the work is too long to give an decent summary of its contents in a space as short as I have here. The table of contents alone of the complete *Liber Astronomiae* would be over thirty pages. It is often described as consisting of ten treatises or tractates, but if one actually scans the text, the actual number of sections in the Ratdolt edition of 1491 seems to be greater than that, but in the introduction Bonatti describes the book first as having six sections, and then he breaks the six sections into ten treatises. There seems to have been a degree of arbitrariness in dividing the book into sections, and it appears that various copies of the manuscript have different numbers of treatises in different orders.

Because your translator, Robert Zoller, has provided an extensive introduction to the material that is covered in the first book of this series, I will not go further in this respect. However, it appears that the edition of 1530 that Zoller has used as the basis of his translation does not contain an introduction to the whole work which seems to have been written by Bonatti, himself. This introduction is contained in the Ratdolt edition of 1491 which I have used for the editing of the translation. Therefore I have taken the liberty of providing a translation of that text myself as part of my introduction. Also this text contains the

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[1] This is not my choice of words. This is how it was actually put at the time.

aforesaid summary of the text, as well as Bonatti's dedication of the work to God, to Jesus, to the students who may find the book of value, and to his nephew. In this introduction he declares his intention to create a work that can be understood by those who are relatively unlearned in the other sciences of the age, but who are willing to spend the time and effort to learn. From what we have seen thus far of the *Liber Astronomiae*, he succeeded. Here then is what purports to be Bonatti's introduction to the *Liber Astronomiae* from the 1491 edition published by Erhard Ratdolt.

Introduction to the Liber Astronomiae Contained in the 1491 Edition of Erhard Ratdolt.

In the name of the Lord, Amen! Here begins the introductory book on the judgments of the stars; and it is not only an introduction to judgments, but to the astronomy of judgments, which has been brought forth by Guido Bonatti of Forli of the province of Romandiola in Italy. He has gathered in this work those subjects out of the sayings of the philosophers which seemed to him to be useful in introducing those persons who desire to consider the judgements of the stars. [He also has gathered] those subjects which seemed to be suitable for those persons who wish to judge according to the significations of the stars, and also those subjects which pertain to certain other matters concerning judgments.

In the name of the Our Lord Jesus Christ, who has mercy on us, holy, true God and true man, to whom there is no equal, nor similar, nor can there be, and of his most blessed mother Mary, always virgin, glorious, and of the blessed Valerian martyr, prince, governor and defender of the Commune of Forli,[1] who with the Father, and at the same time with the Holy Ghost, in the unity of essence and in the trinity of persons, is prayed to by the faithful, and also glorified as the three and one. Nor is there another God beyond him who made heaven and earth, and everything in them, who made it firm and who brought forth everything for the use of Man, who ornamented heaven with the

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[1] This is an unknown reference, but seems to refer to a patron saint of Forli, Bonatti's home city. What is confusing is that the text immediately afterward again refers to the trinity of which a patron saint cannot possibly be a part.

stars, and such illuminating lamps[1] that by their virtues they dispose and rule all inferiors, and similarly offer guidance to Man insofar as it is granted;[2] and he has placed rational souls before all other animate beings so that everything might serve them, and preferentially causes these same [rational beings] to know and to understand; he has manifested to them also the motions of the supercelestial bodies and their significations; he has spread out heaven for rational beings as a parchment so that they can recognize in and through heaven, which communicates and reveals the divine wisdom, not only the past or present, but also [so they can] guard against, foresee, be able to pronounce upon future matters.

I have studied something of astronomy, and have looked at the many works of our predecessors, which must be much honored and revered by us. Nevertheless some of these [predecessors] who loved brevity said that, whatever [else] they might say by way of introduction, it was their intention to speak to those who are [already] advanced in other sciences, even though they need to be introduced to astronomy, especially to judgments, and [are] unlearned [in these. Therefore I, Guido Bonatti of Forli, desired to compose this work and to compile out of the sayings of the ancients the more useful subjects, which seem to me to have gone on the way of truth, [and] which have been found in those sayings. To this end [I desired] to put in this work anything in astronomy that would be useful for those who have not been [already] introduced extensively into other sciences, so that these persons might easily, although not necessarily quickly, be able to arrive at the desired goal of [making] judgments. Although seeking wisdom and divine benevolence I am advanced in days, may it be deemed worthy that I be granted grace with the wholeness of body and attendant life, so that I may finish this work for the glory of God, and of all of those others who desire to study, and for your advantage, my nephew Bonatti.

And because this work will be long and prolix, and because long, difficult, and very entangled subjects cannot be unentangled fully in all of its parts by a small number of words, in order more completely to avoid prolixity, I do not intend to put forth disputations and large

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[1] *lucernis*. There is a pun here because this word means both 'lamp' and 'teacher'.

[2] Complete and perfect guidance from the stars and planets is not permitted to mankind.

numbers of proofs, although some will be put forth in this work. I intend that [this work] be put forth not only for the utility of students, but also for your utility, Bonatti.

I have divided this work into six parts. Of these the first is a general introduction; the second part is [about] interrogations; the third part, elections; the fourth part is [about] the revolutions of the years and of the world, and conjunctions are also included; the fifth part is about nativities; and the sixth is about showers and rains.

By way of introduction I shall proceed thus: first I shall treat of the advantage which we gain from astronomy and the judgments of the stars, and in confirmation of this I shall speak likewise of its nobility; and I shall oppose certain persons who wishing to speak against judgments of the stars, or elections; and [I shall speak] of other matters pertaining to this. In the second [tractate] I shall treat of the division of the circle of the signs, in what manner they are ordered, that there are naught but 12, why it happens to be so, their denomination, and about the accidents [which pertain] to this. Third I shall say what happens to the seven planets among themselves, and what befalls each of them from another, and concerning those matters which pertain to the eighth sphere.[1] In the fourth [tractate] I shall give advice concerning certain conjunctions, and explanation of certain chapters.[2] In the fifth [tractate I shall speak] concerning certain considerations which refer to judgments. Afterward in the sixth [tractate] I shall place a section on judgments. In the seventh [tractate I shall speak of] elections. In the eighth, revolutions. In the ninth, nativities. In the tenth and last [tractate I shall speak of] the revolutions of seasons, or showers and rains.

The End of the 1491 Introduction.

The reader might get the impression from the breadth of the book that the material is treated in brief or superficially. Bonatti often states, as he does in the introduction translated above, that he gives only a brief treatment of some matter, but this is usually only in philosophical discussions. In fact many of the treatments of subjects which Bonatti provides in the various treatises would constitute books of quite

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[1] House division.

[2] *et expositionem quorundam capitulorum.* The sense of this is not entirely clear, unless Bonatti refers to chapters written on the subject by other authors.

reasonable lengths in their own right. This is particularly true of the treatises on horary astrology, electional astrology, revolutions, and natal astrology. The *Liber Astronomiae* is a truly encyclopedic set of treatises on Medieval astrology, and provides nearly complete coverage of astrology at the moment when it had just come back to the West.

Translator's Preface by Robert Zoller

As the Hindsight Project is publishing the *Liber Astronomiae* in a number of installments, it seems unwise to attempt to present an introduction to the entire work at the very beginning. The *Liber Astronomiae* is over 800 pages long and contains much that the modern astrologer will find new, and much that requires an introduction. To attempt to provide such would constitute a booklet in itself. A wiser approach seems to be to provide an introduction to each segment of the book as we publish it. In a later edition these introductory remarks will be gathered together into an introduction to the book. Therefore, pursuing this course, the following introduction is restricted to a discussion of the First Tractate and part of the Second.

What is the *Liber Astronomiae* and who was its author?

Bonatti's *Liber Astronomiae* was written sometime after 1282 C.E. Lynn Thorndike, in his *History of Magic and Experimental Science*, vol. II, chap. LXVII, p. 825, calls the *Liber Astronomiae*, "The most important astrological work produced in the 13th century." During the preceding century Western scholars, largely in Spain and Sicily, prodded by the discovery of Arabic Science, which the West learned of as a result of the Crusades,[1] furiously translated Arabic scientific works on astronomy,

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[1] So, at any rate the story is usually told. Richard Lemay, in an article entitled, "Translators of the Twelfth Century: Literary Issues Raised and Impact Created," which appeared as an Appendix to "Medieval Philosophers" in the *Dictionary of Literary Biography*, vol. 115, Gale Research 1992, Detroit, Mich., suggests that we may not have full understanding of what led to the wave of translations of Arabic texts into Latin in the 12th century. He says, pp. 367-368, "With the beginning of the twelfth century a deliberate and systematic movement of committing to the Latin language the scientific treasures of contemporary Arab science (essentially mathematics and astronomy) began to manifest itself. Whether this Latin demand represented a new awareness engendered by protracted contacts with higher levels of Muslim society during the Crusades, both Eastern and Iberian, it is not possible to determine." He points to the fact that the Jewish translator John of Seville is the first to begin the translation effort. His translation of Abu Ma'shar's *Greater Introduction* was

astrology, alchemy, medicine, mathematics, and philosophy. The 13th century was the century during which these translations were disseminated and assimilated. Bonatti's work is a Summa of astrological practice. Encyclopedic in scope, it collected all known Latin translations of Arabic astrology, and, as such, is one of several comprehensive treatments of the art to have survived. It is therefore a treasure chest of Medieval astrological techniques and theories.

The latter are as important for us as the former because the successful application of the Medieval techniques depends to some degree in the right conceptualization of the art. This we get throughout Bonatti's work, but especially in the First and Second Tractates. This booklet includes all of the first and part of the second. The next booklet will contain the remaining part of the Second Tractate.

The *Liber Astronomiae* is of particular importance in that, unlike most of the Greek works, it is a complete treatment by a professional practitioner. Unlike the Arabic astrological works, such as the very important *Greater and Lesser Introductions* of Albumasar, Bonatti's work was compiled from the Latin translations of most of the Arabic works available in the period to a European practitioner. Furthermore Bonatti wrote in Latin, the universal medium of communication in Medieval Christendom. This means that in the *Liber Astronomiae* we are confronted with a full and accurate compendium of the actual practice of the Medieval European astrologer shortly after astrology's transmission and re-introduction to the West from the Arabs. And, because it was written in Latin, it could be, and was widely disseminated.

Arabic astrology had reached its acme around the time the Crusades

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completed in 1133. John seems to be responding to political events as well as to a new European demand for Arabic scientific learning. The First Crusade was launched in 1095 and Jerusalem was liberated in 1099. In addressing this question we must also keep in mind that the "Crusades" referred to may mean either those in the Levant, or those in Iberia, which began at more or less the same time as the First Crusade. Toledo was taken by the Christians in 1085. A Crusade was launched against the Moslems in the Ballearic Islands in 1114 and Alfonso I of Aragon took Saragossa in 1118. Lemay, in the article cited, suggests that Frederick II's 13th century educational reforms, which encouraged the study of the natural sciences, including astrology, also created a climate favorable to the preservation of the 12th century translations.

began. The transmission of Greek Science to the Khalifates in the 8th-10th centuries had given the Moslems both astrology and Aristotle, two treasures they preserved and passed on to the West in the 12th century. Aristotelian philosophy had, by the 6th century C.E., become intimately wedded to Neoplatonism. The latter School exploited the former to provide scientific support for the more religious views of Alexander Aphrodisius, Plotinus, Proclus, and the Syrian School. Under Islam, Aristotle's logical and scientific Works were put to similar use. In the Latin West, however, the scientific works of Aristotle were lost after the 6th century, and the logical works were known incompletely, occasionally, and indirectly, until what Haskins has called, "The Renaissance of the Twelfth Century." Thus the 12th century saw the re-introduction of science to the West after roughly 600 years of darkness during which the Christian West had only the Trivium, and precious little of the Quadrivium to occupy themselves with. And it must be pointed out that the "science" that was re-introduced to the West included not only the Arabic interpretations of Aristotle, but an Aristotle intimately wedded to Astrology.

Bonatti's work must be seen in this context. As is apparent from Ptolemy's *Tetrabiblos*, the Hellenistic Greeks had pressed Aristotle into service in order to create a scientific astrology. We find this scientific astrology being transmitted to the Moslems in the 8th-10th centuries along with the tradition represented by Dorotheus, one which appears to be more empirical and less philosophically oriented, and which may be closely connected with the transmission of the astrological Hermetica. It is certain that Dorotheus' astrology has such close affiliations with the *Hermetica*. Under the Neoplatonic influence of the Isma'ilis, as documented in the *Rasa'il*, the encyclopedia of the 9th century Brotherhood of Purity, all sciences are subsumed under astrology, alchemy, and magic, and these are seen as so many paths to Allah. Islam, philosophy, and Hermeticism grow together into Sacred Science.

Both the Aristotelian and the Hermetic astrological traditions flow through Albumasar in particular, as well as his teacher Al-Kindi, and many other of Bonatti's sources into the *Liber Astronomiae*. Moreover, Aristotle is listed by Bonatti as an astrologer. This may indicate that his scientific works such as *Physica*, *De Caelo*, *De Generatione et Corruptione,* and his *Metaphysica* qualified him as a "Natural" astrologer. It may equally be that Bonatti was drawing on Latin

translations of Arabic astrological texts purporting to be by Aristotle. Such was the prestige and influence of "The Philosopher," and such the literary practices of the day, especially in esoteric and occult circles. As a result we find in this Summa of Medieval astrological praxis important expressions of the philosophical and Hermetic astrologies all merged into one and plopped down in the midst of Medieval Christendom.

The *Liber Astronomiae* was an extremely popular book in manuscript. It shows up in the lists of books in the libraries of numerous persons of importance. For instance, Marsilio Ficino, Pico della Mirandola, and John Dee are known to have possessed copies. It was translated into several vernacular languages,[1] and went through numerous editions as a printed book. It clearly provides the backdrop to the works of Gaurico, Schöner, and Lilly. Morin's rants against Arabisms and the improper usage of "Universal Significators" is aimed principally at Bonatti's work. Pico's *Adversus astrologiam divinatricem* specifically calls Bonatti on the carpet.

About Bonatti not much is known. Salimbene mentions him in his *Cronica* as disputing astrology with a certain Brother Hugo. He is said to have taken an active part in the defence of his home town Forli in which he acted as military adviser to Count Montefeltro, who was opposed to Pope Martin IV. They succeeded in defeating the Pope's army in the first assault on Forli, but Bonatti is said to have followed his patron Montefeltro into a monastery following their defeat in the following year. Dante placed Bonatti in the Eighth Circle of the *Inferno* in his *Divine Comedy* along with others who attempted to predict the future.

Astrology in Bonatti's day was a questionable (though, apparently it could be profitable) pursuit which had been repeatedly condemned by the 13th century Church (most recently in 1277 in Paris), and was maligned at the time as devilish superstition.[2] The art's heathen origins

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[1] Not however, English, except for the 147 aphorisms translated by Coley. [RH]

[2] It wasn't until 1250, after the completion of Albertus Magnus' *Speculum Astrologiae* that it was safe to publish books on astrology in France. Albertus' book helped the Church establish criteria for approving certain aspects of astrological lore and condemning others. Apparently what happened was that the initial translations of the Twelfth century raised serious questions regarding

were only barely veiled in Bonatti's sources. The Medieval Church rightly saw that astrology was its old foe risen again in the west like a phoenix after a centuries long hiatus to compete with the faith of Christ. Bonatti was drawing on Arabic sources in Latin translation and, while his Arabic sources were Muslim for the most part, there was nonetheless a strongly Hermetic undercurrent in many of them, notably Al-kindi, Abu Ma'shar, Thebit Ben Qurra, and others. This Hermetic tradition formed the esoteric tradition of the West in the Middle Ages, the Kabbalistic tradition being the sole possession of the Jews, and quite possibly only in its early stages in Bonatti's day.

The Church knew full well that this same Hermetic Tradition was one and the same with the Sabian religion which survived in Mesopotamia, and even thrived in Baghdad until about the end of the 12th century, when Muslim fundamentalism arising in reaction to the military and propagandistic threat of the Christian Crusades all but destroyed all heterodox sects in its sphere of influence. With the coming of the Mongols in the 13th century additional pressures beset heterodox groups.

One area which remained rather safe for nominal Muslims who were syncretists and crypto-heathens was Ommayid Spain where at this time Jews, Moslems, Christians, and, apparently, clandestine Sabians all enjoyed relative tolerance. It is in 11th century Andalusia (Ommayid Spain) that the Hermetic Sabian magical text, the *Picatrix,* was written.

Hermetic Sabianism survived in the Middle East in 9th through 12th century Harran.[1] It was a continuation of classical heathenism, yet remarkably the community was accorded religious toleration under

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heresy and doctrine. The Church's response, formally expressed in a series of condemnations promulgated from the bastion of orthodoxy, the University of Paris from 1210, was to put the entire subject was under the ban. This made the ownership of astrological books by anyone in the city limits of Paris punishable by death at the stake. Outside Paris the ban had little effect until the Condemnation of 1245 which extended it to the whole of France. In Sicily and Italy in general, it seems, things were different. Frederick II Hohenstaufen, the Holy Roman Emperor, openly flaunted the Condemnations of 1210 and 1215, and encouraged the study of the natural sciences, including astrology, as the basis of his program of educational reform. Many thanks to Professor Richard Lemay for clarifying this point for me. Bonatti is said to have ties to Frederick's court and Michael Scot certainly did.

[1] In southeast modern Turkey, then part of Syria.

Koranic Law as a "People of the Book" because they accepted the Hermetic Writings attributed to Hermes Trismegistus, as well as at least nominally accepting the Old Testament and the Koran. The Hermetic writings were regarded by some Moslems as the work of the Antediluvian prophet Idris, and hence, regarded as worthy of reverence. Thus they were permitted to continue their practice of astrological magic and public worship of the astral deities. This tolerance they enjoyed in Harran and even in Baghdad until around 1100. Presumably some of them emigrated to Spain and managed to survive possibly until the 12th century. The *Picatrix* was produced in Arabic Spain in the 11th century.[1] It was translated into Spanish[2] in 1256 on the order of King Alfonso and apparently immediately thereafter into Latin.[3] This work was undoubtedly known to Rome and was precisely the sort of thing they would have feared. Bonatti does not cite it as a source, but it was fairly influential in occult circles in Europe in the Middle Ages; nor was it unique. Not only does it enjoin the practitioner to pray to the planetary demons or angels, it views them as the real workers of natural and supernatural effects.

When we see Bonatti referring to the "supercelestials" and the "Unalterable and immutable creatures beyond passion," we may be seeing him merely speak of the planets in terms of Aristotelian science, which would make him only mildly questionable. But he could use precisely the same language intending to be understood by Hermetic philosophers as referring to the astral demons or angels. His language has an ambiguity in it. While it is unquestionably Aristotelian, it is consistent with Hermetic views found in the *Corpus Hermeticum*[4] and in Iamblichus' *On the Mysteries.*[5]

In fact to be an Aristotelian in the 13th century was also not without its dangers. The same Condemnation of 1277 which condemned

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[1] Abu al-Qasim Maslama ibn Ahmad al-Majriti to whom the text is ascribed died c.1005-1008. Few scholars accept this attribution. Sezgin suggests that the real author was Abu Maslama Muhammad ibn Ibrahim ibn 'Abd al-da'im al-Majriti. Pingree is unconvinced.

[2] by Yehuda ben Moshe, not extant.

[3] By Aegidius de Thebaldis.

[4] *cf.* Libellus I, 13a-b; Libellus III, 2b-3b; Libellus V, 3; Libellus XIII; Asclepius 4-6.

[5] Section I, Chapters IV, VIII, IX, X *et passim.*

astrology also condemned a great deal of Aristotle. Later, when Aquinas' philosophy was accepted and Aristotle drafted to sell Christianity to the intelligentsia, it would be safe to be an Aristotelian; but in Bonatti's day it was only a bit less objectionable than overt demonology in the manner of Sabianism.

Bonatti's reverential language in referring to the "supercelestials" is definitely indicative that the Medieval astrologer recognized that he was dealing with more than inert entities in the heavens. He clearly thought of the planets in a Neoplatonic sense as chariots of angelic forces. This point is of interest to us today as many astrologers have lost or never known about the magical-religious aspect of astrology. Yet a real question remains when we consider Bonatti's definition of astrology: Were the supercelestials agents of Christ, or were they in fact the pre-christian heathen astral deities of Sabianism? In either case, as his definition clearly shows, there was not in his mind any absolute separation of philosophy cum religion and science in his astrology.

Bonatti's Astronomy is geocentric, of course, and rests ultimately on Ptolemy's *Almagest*. The Arabs had translated this important classical astronomical text in the ninth century.[1] In 12th century Europe Gerard of Cremona translated the *Almagest* from Arabic to Latin. It was this translation which was most widely used for centuries and probably that which Medieval astrologers such as Bonatti used.

The reference to circular motion of the spheres will strike the modern reader as strange. Astronomers of the ancient world and Bonatti's day did not know that the planets moved in elliptical orbits. It had been held since Plato's day that, since they were believed to be of the most perfect matter (the quintessence), they must move in the most perfect motion which was held to be circular. Plato himself was the author of this misconception, and his instruction to his pupils to articulate an astronomy which accounted for all astronomical motions by reference to circular motion is credited by modern historians of science with delaying the discovery of "true" astronomy by almost 2000 years.

The arrangement of Bonatti's arguments as well as his terminology, especially in his definition of astrology, shows very clearly the powerful influence of Aristotle. Bonatti tells us the probable ultimate source of

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[1] It was translated by Ishaq ibn Hunein in Baghdad in 828. He also translated the *Tetrabiblos*.

his Aristotelianism in the text by citing the name Alfarabi.[1]

Through his Arabic sources[2] Bonatti follows Aristotle's *Topica* in his format and terminology. This work, as well as the *Categories* was widely relied upon by Medieval scholars for composition and organization of their material. In Book One, #5, Aristotle lays out his system of definition in which a thing's essence is signified by a name or phrase which are characterized according to property, genus, and accident. In *Categories*, 5, we learn that all substances are characterized according to species, genus, and differentiae. All these terms are used by Bonatti. Moreover, his reliance on the *Categories* is most apparent in his definition of astrology, in his almost word for word lifting of Aristotle's discussion of the six kinds of change (*Categories*, 14,). Aristotle's text says, "There are six kinds of change: generation, corruption, increase, decrease, diminution, alteration, and change of place; but there is a question about change of place." Reference to the text of the definition above will show how closely he is following Porphyry's paraphrase of Aristotle. The references to active and passive are from *Topica* and *Categories*. His reference to the end or use of astronomy is in conformity with the medieval usage of Aristotle's Final Cause.

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[1] Alfarabi was born of Turkish parents in the town of Farab in Turkestan in about 870 and died in 950. His full name was Abu Nasr Muhammad ibn Tarkhan ul-Farabi. As a young man he went to Baghdad and learned Arabic, studied math, medicine and philosophy. He was fluent in astronomy as well. His philosophical work was of the utmost importance. Through his commentaries and interpretations of Aristotle he introduced the philosopher to the Arabs. He influenced Avicenna's *Canon of Medicine* and Averroes. His works were translated by Gerard of Cremona in Spain in the 12th century and were central in spreading Aristotelianism among the Medieval European intelligentsia.

[2] Not all of Aristotle's logical works were known directly to the Arabs or the Europeans in the Middle Ages. The source of much of the Medieval knowledge of The Philosopher's classification system was Porphyry's (3rd cent.) *Isagoge*, an introduction to Aristotle's logic, that these ideas were known. *Cf. Porphyry the Phoenician: Isagoge*, with translation, introduction and notes by Edward W. Warren, Toronto: The Pontifical Institute of Medieval Studies, 1975, esp. the introduction. By the way, in saying, "through his Arabic sources," I do not mean to imply that Bonatti read Arabic. So far as I am aware he worked from the 12th century Latin translations of Arabic astrological works.

Finally, his reference to the "supercelestials" as "creatures beyond passion, unalterable, etc." is in conformity with the idea that the celestial bodies, being composed of the most perfect substance, the ether or quintessence, were not subject to alteration and decay as were sublunary bodies, which were composed of the four elements, fire, earth, air, and water. Aristotle elaborates on this idea in his *De generatione et corruptione*, *Physica*, and *De Caelo*. Whereas the Hermetic tradition considered the celestial bodies to be divine, the Aristotelians did not. They held a more scientific and philosophical attitude which viewed the celestial spheres, but especially the Sun and Moon, to be the agents whereby alteration and the other kinds of motion were effected. This point of view could be (and was) viewed as complementary to the more religio-magical Hermetic view.

In the First Tractate, Bonatti introduces us to astrology in a typically scholastic manner, arguing for the importance of astrology on spiritual grounds in a formal Aristotelian argument which leads into his cosmology and astronomy. This permits him to sketch his theory of astral influence and place astrology (which he wants to call astronomy[1]) as one of the mathematical sciences of the quadrivium, and to indulge in his favorite pastime, cleric bashing, a form of entertainment he resorts to several times in the *Liber Astronomiae.*

Astrology, we are told, is the only science by which we may know all things. The future is a useful thing to know. Astrology is a real science. It has four parts. In the first part it treats of the structure and form of the universe and the circles of the heavens. In the second the causes or motions of the planets and other stars is dealt with. In the third part the rising and setting of the signs is dealt with; in the fourth part, the eclipses of the Sun and Moon and the other planets. It is of interest here that this four-fold division reminds us of Clement of Alexandria's account of the four parts of Hermetic Astronomy.[2]

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[1] Indeed some of the extant manuscripts of this work are titled *Liber astrologiae* while others are styled *Liber astronomiae*. The texts are the same. Interestingly Bonatti's contemporary, Roger Bacon, follows the same practice in his *Opus Maius*.

[2] Clement of Alexandria (150?-220? C.E.), *Stromates* IV, 4, 35.3-37.3. describes an Hermetic procession in 3rd century Egypt which consisted of a singer carrying two books of hymns, *a "horoskopos" carrying 4 books (one on the fixed stars, one on the planets, one on the conjunctions of the Sun and the*

Astrology's species are two, arithmetical and judicial. It has its own instruments, such as the astrolabe and other devices. He derives its name from "the rule of the stars." The Holy Fathers practiced it, thus we should not condemn it. All these arguments are typically scholastic "proofs" of the legitimacy of a study.

In the Second Tractate, Bonatti begins his instruction of the elements of astrology with the division of the circle of the ecliptic into twelve signs, and then discusses how the signs act on the elements. He discusses why the signs are ordered in the way they are, why they are counted in the direction they are counted in, why they have the names they have, and which ones are of direct or of crooked ascension. Next he discusses the "circles," i.e., spheres, of the planets. He discusses why the planets are said to rule this or that sign (house), the detriments, exaltations, and falls of the planets.

Little needs to be said to astrologers about Bonatti's discussions of the elements of astrology except to say that Medieval and Ancient astrological texts rarely give sufficient, if any, explanation to questions such as Bonatti addresses. It must also be said that Medieval "reasons" are often unacceptable to modern minds who prefer "logical", "scientific", and mechanistic explanations for things wherever possible. Bonatti's "reasons" are for the most part in accord with Medieval logic, often times more rigorous than what passes for logic today. His approach is certainly "scientific" in terms his contemporaries would have approved of. The reader should be aware of this before encountering Bonatti's reasons why the planets rule such-and-such a sign or signs, which might sound like circular reasoning otherwise.

The reader will note that his reasons for there being twelve signs in number are mathematical, conceptual, and symbolic. There is no argument from physical causality as in electro-magnetic theory, or any Medieval equivalent such as "radiations" which are different in one region of the sky or another. It is easy to see that he is looking to his natural theory first, that all sublunary things are composed of the four elements, and then imposing this understanding onto the heavens, which must be viewed as the causes or origins of sublunary reality. Yet he is

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Moon, one on the risings of the stars), the Stolistes (who were responsible for the education and for the vestments), who carried 10 books on all the piety of the Egyptians, and the prophet. He carried the laws of the Gods and the formation of the clergy.

certainly not innovating here. He is following the philosophical procedure which had come down to his time from the Greeks by way of the Arabs.

While the exact manner by which the celestial influences imprint upon inferior natures is left unclear, it is important to note that even though the division of the ecliptic is explained conceptually, and perhaps symbolically, nonetheless the celestials are viewed as having some kind of concrete, physical influence upon sublunary bodies. This is what is meant by "imprints." Thus, we read, "Taurus, Virgo and Capricorn which are earthy signs, act on the earth element but in diverse ways. Taurus acts on the earth by imprinting on it temperate coldness and dryness. . ." and, "Virgo acts on the earth element by imprinting on it coldness and dryness. . ." This "imprinting" is tied in somehow with the celestial motion in a manner Bonatti never makes very clear but which we have also found in Ptolemy's *On Criterion and Rule* (from a partial translation, as yet unpublished, by Robert Schmidt). In Bonatti's very Aristotelian account, the motion imparts the "primitive qualities" of hot, cold, wet, and dry to compounded bodies, thereby altering them and producing change in matter. This concept of physical causality is nowhere clearer than in the Second Tractate, First Part, Chapter VI, which could have been taken almost directly out of Aristotle's works, *Physica*, *de Caelo*, and *de Generatione et Corruptione.*

The explanation of why the planets are exalted in this or that sign has haunted modern Western astrologers for some time. Bonatti relies upon Albumasar to solve this conundrum, and his solution is, as we might expect, based on Aristotelian physical principles. Fagan suggested an Egypto-Babylonian origin for the exaltations. Knappich seems to endorse a Babylonian source,[1] as he identifies the constellations ruled by the Babylonian planetary gods as those corresponding to our exaltations. This would suggest that the Egyptians, if they adopted the Babylonian rulership-exaltations, probably did so after Cambyses conquest of Egypt in 525 B.C.E. when a good deal of Babylonian astrology was brought to Egypt by the Persians (who had also previously conquered the Babylonians). But the astrological attributions

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[1] Cyril Fagan, *Zodiacs Old and New*, London: Anscombe, 1951, *passim.* Wilhelm Knappich, *Geschichte der Astrologie*, Frankfurt am Main: Klostermann, 1967, p. 32.

were religious dogma. They did not require philosophical reasons to support them. Philosophical arguments resting upon natural scientific phenomena, such as we see in Ptolemy's *Tetrabiblos,* and here in Bonatti originated with Greek Science and Philosophy. The argument presented by Bonatti derives from the 9th century Arabic Scientific tradition, especially from Albumasar and Al-Kindi. They in turn got it from the Nestorians and Byzantines beginning in the 8th century, and possibly from the Harranians in the 9th. The 8th century Nestorians, and Byzantines preserved Hellenistic Greek Science which relied heavily on Aristotle. Since Aristotle died in only 322 B.C.E., the furthest back we can trace these philosophical explanations for the exaltations is to c.350 B.C.E. In Bonatti's work we are dealing with a Medieval scientific explanation for something older, something which might not have a reason which can be found simply because there never was a "reason" for it in the philosophical sense.

Latinized Forms of Arabic Names that Appear in Bonatti.

The following are names and corruptions of the names of Arabic and earlier astrologers, and other personages that appear in Bonatti and other medieval sources. The main compilation is by your translator, Robert Zoller, with a few additional notes by your editor, Robert Hand.

Aardimon or *Aaydemon* — Variant forms of *Ahaydimon, q.v.*

Adila — Unknown.

Ahaydimon — Unknown, but it might be a corruption of *agathe daimon* or good daimon. This would suggest an Hermetic reference.

Ahomar — Wrote a *Liber Haomar de nativitatibus in astronomia . . .* translated by Iohannes Hispalensis, Amplon, Quarto 365, 14th cent., folios 100-119.

Albenait — Unknown. But *Cf. Liber novem iudicium in judiciis astrorum. Clarissimi auctores istius voluminis: Meschella, Aomar, Alkindus, Zael, Albenait [Albohali], Dorotheus, Jergis, Aristotles*, Ptholomæus,Venice, 1509.

Alboali — Masha'allah's student, Abu 'Ali Al-Khayyat (c.770-835 C.E.) was known to those intimate with him as Abu 'Ali Yahya ibn Ghalib and as Isma'il ibn Muhammad. He was one of the leading astrologers of his day. He wrote an *Introduction to Astrology*; works on horary astrology, political works on forms of Governments, *On the Revolution of Years of Nativities* (we would call these figures solar returns), a scientific work on the prism, and a work called *the Rod of Gold.* According to Holden, only his horary work, *on Questions*, and *the Judgements of Nativities* survive in Arabic. The latter was translated into Latin by Plato of Tivoli in 1136, and by John of Seville in 1153. Holden has used the latter.

Albumasar or Albumazar — The famous Persian astrologer Abu Ma'shar (full name: Abu Ma'shar Ja'far ibn Muhammad ibn `Umar al-Balkhi) (787-886 C.E.) is an example of Hermetic influence on Arabic

astrology. His works (written in Arabic) represent a curious fusion of Sabian Hermeticism, Persian chronology, Islam, Greek Science, and Mesopotamian astrology. He was instrumental in fostering the identification of the Antediluvian Prophet Idris with Enoch and Hermes. He was an extremely successful practitioner of the Art who travelled throughout the Mid East in service to numerous Indian, Persian, Arab, and Egyptian chiefs of state. His reputation was established in the Christian West by Peter of Abano in the 13th century in his *Conciliator Differentiarum Philosophorum et Precipue Medicorum* (Diff. 156) where he quotes the *Al-Mudsakaret* or (*Memorabilia*) of Abu Sa'id Schadsan, a student of Abu Ma'shar's who recorded his teacher's answers and astrological deeds. The *Memorabilia*, which has come to be known among scholars as "Albumasar in Sadan" due to traditional corruptions of both men's names, is analyzed by Lynn Thorndike in *Isis* 1954 pp. 22-32.

It will suffice to say here that it is perhaps the only example of a Medieval astrological hagiography. It portrays "the master" as a nearly omniscient wise man learned not only in the techniques of all branches of the art but also in its traditional history and aware of the contributions of his predecessors. He is quoted in *Albumasar in Sadan* (p. 29 of *Isis* article), to the effect that he follows Messahala's method of projecting rays, and in other locations admits to following other methods of Messahala (Masha'allah).

Alcaiat — See *Alboali.*

Alchabitius — Alchabitius or Al-Qabisi, surnamed 'Utman ben Ali, flourished circa 960 C.E. Arabic Astrologer. He studied under al-Imrani. Wrote an introduction to the art of astrology and a work on the conjunctions of the planets. His works were translated from Arabic into Latin by Iohannes Hispalensis.

Alchindi — Variant form of the name *Al-Kindi, q.v.*

Alezdegoz or Alenzedegoz — Unknown.

Alfraganus — Alfraganus, or Al-Farghani, 9th cent. Turkish Christian astronomer. Full name: abu-al-`Abbas Ahmad al-Farghani. Summarized Ptolemy's *Almagest.*

Alhayat — See *Alboali.*

Al-Kindi or Alkindi — full name: abu-Yusuf Ya`qub ibn-Ishaq al-Kindi` (9th century) called "The philosopher of the Arabs." Teacher of abu Ma`shar. The material below comes from the following sources:

Handbuch der Orientalistik, Herausgegeben von B. Spuler unter Mitarbeit von H. Franke, J. Gonda, Hammitisch, W. Helik, B. Hrouda, H. Kähler, J. E. van Lohuizen-De Leeuw und F. Vos.

Erste Abteilung: *Der Nahe und der Mittlere Osten*, Herausgegeben von B. Spuler. Ergänzungsband VI, Zweiter Abschnitt: *Die Natur und Geheimwissenschaften im Islam*, Leiden/Köln, E. J. Brill, 1972.

Handbuch Der Orientalistik von M. Ullmann: *Astrologie*, pp. 371-358.

Al-Kindi's tractate, *fi Mulk al-arab wa-kammiyatihi*, was translated by Joannis Hispalensis carrying the title *Liber individuorum superiorum in summa de significationibus super accidentia que efficiuntur in mundo* and it was printed under the false title *Albumasar De magnis coniunctionibus: annorum revolutionibus: ac eorum profectionibus: octo continens tractatus,* Augsburg 1489, Steinschneider Europ. Uebs. A p. 47 Carmody Translation, p. 91f, Thorndike Notes p. 150 number 46, Lemay Abu Ma`shar, p. XXXI.

Al-kindi's K. *al-Mudhal al-kabir ila `ilm ahkam an-nuqum* mss: Paris 5902 (131 foll.,written 325/937): Leiden 1051 (= Cod. 49 Gol.) Bodl. 565; number 294 (+Hydii 3); Chester Beatty 4075; 5281; Esc. 938,7 Renaud; Hamidiye 829; Krause mathem. p. 450.

He also wrote *de radiis stellacis. De Radiis* has been published in the Archives d'histoire doctinale du Moyen Age, vol 41, 1974 and edited by M. T. D'Alverny and F. Hudry. It has been translated by the translator of this work as the first volume of the Project Hindsight.

Al-kindi was very active in Baghdad translating Greek mathematical and philosophical works into Arabic.

Almansor — Almansor or al-Mansur (712?-775) second Abbasid Caliph. Full name: abu Ja`far `Abdullah al-Mansur. A patron of science who encouraged translation of Greek and Latin classics into Arabic. He moved capital to Baghdad.

See Steinschneider Europ. Uebs. Ap 63f.; *Millas Tradducciones* p. 155 on *Almansoris iudicia seu propositiones* translated by Plato Tiburtinus in the first half of the 12th century.

Almetus, Akhmet, Achmet or Ahmed. — He may be the early 10th century astrologer Ahmet abu Ja`far, who Richard Lemay believes wrote *The Liber Fructus,* also known as *The Book of Fruit* or *Centiloquium*, or he could be Ahmed ibn Yusuf. S. J. Tester, in *A History of Western Astrology*, Woodbridge, Suffolk, The Boydell Press, p. 184, tells us that Moritz Steinschneider thought that the 13th century *Commentary on the Centiloquium* attributed to Haly, was actually written by Ahmed ibn Yusuf. For a list of the many works by Steinschneider, see Thorndike's *History of Magic and Experimental Science,* New York: Columbia University Press, 1923, Vol. I, pp. xxxvi, xxxvii. See also Thorndike, Vol. II, *op. cit.,* pp. 291-293, regarding Achmet's possible identity.

Arestali or Arastellus — Possibly a corruption of Aristoteles.

Astaphan or Astaphaz — Actually Stephen of Antioch who translated ten works of Galen from Arabic in the 12th century. Charles Homer Haskins, in *The Renaissance of the Twelfth Century*, Cambridge: Harvard University Press, 1927, p 295. S. J. Tester, in *A History of Western Astrology*, Woodbridge, Suffolk, The Boydell Press, p. 152, n. 91, places the date of Stephen's translation of this medical encyclopedia as 1127.

Dorotheus — Though his work survives only in Arabic, Dorotheus of Sidon was not an Arab. He was a Hellenized Phoenician writing in Greek in the 1st century C.E. His *Pentateuch* is an important text in fixing later Islamic astrological practice. Numerous fragments also survive in Greek sources, especially Hephaistio of Thebes. See the Project Hindsight edition of Hephaistio.

Hali — Probably Hali Rodan, known as Abu Ali al-Hasan ibn al-Hasan ibn al-Haitham, known as Alhazan (987-1138). Famous scientist, mathematician, and astrologer-astronomer. Wrote on Optics, Mathematics, Physics, Philosophy, and Medicine. He was familiar with Euclid and Ptolemy on Optics. His work on the subject, *Optici thesaurus Alhazani*, translated by Gerard of Cremona, became very influential in the European Middle Ages. Influenced Roger Bacon. First to calculate height of atmosphere. Wrote on atmospheric distortion of Sun and Moon near the horizon. Wrote a *Commentary on the Tetrabiblos of Ptolemy* and the *Centiloquium.*

Hermes — Hermes Trismegistus, a figure to whom many works on astrology, alchemy, and magic were attributed. There is no clear indication that an actual man with this name ever existed. The apparent name may be a sacerdotal title used as a pseudonym by followers of the Hermetic cult. *Cf.* A. J. Festugiere, *La Revelation d'Hermes Trismegiste*, Paris, 1950-4 (4 vols.), or G. R. S. Mead's *Thrice Greatest Hermes*, Detroit: 1978, Hermes Press, (3 vols), and Samuel Weiser, York Beach, Maine: 1993.

Iaphar — This may be Albumasar, one of whose names is Japhar or Ja`far, or it may be the early 10th century astrologer Ahmet abu Ja`far who Richard Lemay believes wrote *The Liber Fructus* or *Book of Fruit* or *Centiloquium.*

Iergis — Variant form of *Irgis*, *q.v.*

Irgis — Unknown. See Thorndike, *History of Magic and Experimental Science*, Vol. II, appendix II, pp. 718-719. Thorndike speculates that Irgiz, Germath, Gergis, Jergis, Hyargus, Jargus, Georgius, and Gugit are all the same fellow, showing up in alchemical and astrological works. He seems to be from Babylon.

Messahalla or Messala — Masha'allah (c.740-c.815) was the foremost of the early Arabic astrologers. He worked in Basra and, together with the Persian astrologer al-Naubakht, was selected to elect astrologically the time for the founding of the new city of Baghdad in 762 by the Caliph Al-Mansur.

Ptolemy (c.100-170). — Author of *Tetrabiblos* and *Almagest.* The Nestorian Christian Ishaq ibn Hunain translated the *Almagest* and the *Tetrabiblos* from Greek into Arabic at Baghdad around 828 for the Caliph al-Mansur. Gerard of Cremona translated his *Almagest* in the 12th century. Plato of Tivoli translated the *Centiloquium* in 1136 and the *Tetrabiblos* of Ptolemy from Arabic into Latin at Barcelona in 1138. *World Who's Who in Science,* Marquise Who's Who, Chicago, 1968. p. 7 lists an Arab translator, Abu Yahya al-Bariq , who was one of the first translators employed by al-Mansur. He is said to have translated Ptolemy's *Quadripartite* and to have died c.800.

Thebit — Thabit ben Qurra, Thebit ibn Korra, or Thibet Ben Qurrah (836-901), a 10th century exponent of the Hermetic Tradition and perhaps the most advanced mathematician and astronomer of his day. His people, the Harranian Sabians, have been called the inheritors of classical heathenism, that is, continuers of the classical philosophical polytheistic religion. He was the author of numerous books on astronomy and at least one on meteorological astrology. He is known best for his mistaken theory of the trepidation of the equinoxes, in which precession is considered as oscillating back and forth about a central position rather than constantly moving in one direction, as is the modern view.

Liber Astronomiae of Guido Bonatti, First Tractate

Showing the Utility of Astronomy in General. Chapter I.

The soul which is in man is quite noble. It gives essence and perfection to the body, and its foods[1] are very noble with respect to the foods of the body because the soul is very noble with respect to the body. She rejoices in intellectual gain, and that depends upon the knowledge of philosophy, and in that the soul rejoices and is delighted. That in which she rejoices is her food, because with that there is a part of Truth and she loves Truth; nor is she able to apprehend it through any science so truly and so fully as through Astronomy. There is nothing except the First Philosophy[2] in which the soul gains so much as in Astronomy or

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[1] Bonatti's Arabic sources relied heavily on Aristotle. The food of the Soul is discussed in *The Works of Aristotle*, ed. W. D. Ross, vol. III, Oxford: 1931, *Cf. De Anima*, trans. J. A. Smith, Book II, section 4. (Pages 416 a & b *ed.cit.*).

[2] First Philosophy, i.e., Metaphysics. *Cf.* Aristotle *Metaphysica*, in *The Works of Aristotle*, Vol. III, 2nd Ed. trans. W. D. Ross, Oxford: Clarendon Press 1928, Book Alpha. Aristotle asserts (982a) that "Wisdom is the science of principles and causes." In 983a, line 25 he asserts that this entails the acquisition of the knowledge of original causes. He launches into an investigation of Number as Cause, citing the opinions of previous philosophers, among them the Pythagoreans who have thought number to be the cause of all things, and wonders in what way this could be true. He ultimately concludes that mathematicals are not separable from sensibles and are not the first principles.

Also *Cf. Al-Kindi's Metaphysics*, a translation of Ya`qub ibn Ishaq al-Kindi's treatise "On First Philosophy", by Alfred L. Ivry, State University of NY Press, Albany 1974. On p. 8 Ivry, paraphrasing Al-Kindi, tells us that knowledge of things is dependent upon knowledge of their causes and the ultimate cause of all is the "True One". The knowledge of this is First Philosophy. The Fourth Chapter of the First Part contains his arguments regarding number. Ivry points out that, while Al-Kindi seems familiar with some kind of arithmetical theory such as Nichomachus', he does not agree with Nichomachus that the monad and the dyad are eternal beings. Whether he also denies the Neoplatonic doctrine of an unbroken chain of being which permits a mystic "*ascensio*" to unity with the One (or merely inspiration from the One)

Astrology. Through this [study], indeed, we know and understand creatures beyond passion,[1] unalterable and immutable, in another essence since they are supercelestial[2] bodies. And through these creatures we are able to draw near to an understanding of the Creator, and to know howsoever much more the human mind is able to attain, and to perceive Him to be beyond passion and unalterable. And because the aforesaid bodies are from perfect and most noble being, which in no way denies this, their forms are most noble and perfected, indeed spherical, in which a beginning is not discovered nor a middle (the center being excluded)[3] nor an end. And therefore their operations are most noble and perfect; more so than the other operations of all the magisteries[4] which are in this world, although the magistery of

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is a debated point.

Such Neoplatonic Doctrines received considerable attention from Averroës (1126-1198) and were extant in Spain during the 12th century. Averroës' doctrines were powerfully influential in Medieval European Christendom and Medieval Jewry and a major means by which esoteric Neoplatonism was perpetuated. See Will Durant's *The Age of Faith*, New York: Simon and Schuster, 1950, pp. 335-338 for a discussion of Averroës life and teachings. Also, Hastings' *Encyclopedia of Religion and Ethics*. Michael Scot translated Averroës' *De Caelo et Mundo*, and Averroës' *Commentary on Aristotle's De Anima* prior to 1220.

[1] This is 'passion' in the original sense meaning 'acted upon' the opposite of 'action', not 'passion' denoting emotion. [RH]

[2] We may well ask why Bonatti uses the term "supercelestials" to describe the celestial bodies. In some cases he seems to refer to the intelligences or daimones behind the bodies of the planets, etc. We may have an Hermetic sub text here.

[3] A line has a middle. A line formed into a circle has no middle beyond that of the center point of the circle, which does not lie upon the line and therefore does not count. [RH]

[4] *magisteriorum*, i.e., natural causes. The word here is used in its Medieval sense, not in its Classical sense, as a superintendent or office of director. In the medieval sense the term has alchemical overtones, i.e., a master principle of nature or philosophers' stone. Bonatti, however, is playing with language here because his next usage of *magisterium* (*magisterium medicorum*, the magistery of the physicians) may be best translated "the office of the physicians." Finally, he follows *this* usage with a third which must be taken in both the classical sense and in the medieval sense as "superintendent" and "a master principle of

physicians may be concerned with noble things (certainly more noble than the magisteries of the terrestrial world); nevertheless the magisteries of the stars and their works are the most noble and exceed all other operations. The cause, being perfect, induces perfect effects. The physician concerns himself with inferior bodies[1] and those that are susceptible to corruption and alteration, and the like. But the astrologer concerns himself with the operations of the supercelestial bodies, which are neither corrupted nor changed.[2] In fact these bodies act on the inferior bodies, which are corruptible, with which the physician concerns himself. But in those [supercelestial bodies] there is nothing corporeal which acts, they neither suffer nor will they suffer until the day which God has willed; concerning which it has been said that

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nature" when he refers to the magistery of the stars. It is in nuances such as this that Bonatti, like other esoteric writers, creates a sub text. In Bonatti's case, the sub text is Hermetic. He comes dangerously close to revering the supercelestials and his classical nuance *in magisterii astrorum* or magistery of the stars can also be read as superintendents (i.e., rulers, Archons) or the stars, that is, astral deities or *daimones*.

[1] They are inferior because they are composed of the elements which exist "under the sphere of the moon," not in the superior heavenly world, but in this physical world.

[2] Bonatti's reference to the "supercelestials" as "creatures beyond passion, unalterable, etc." is in conformity with the idea that the celestial bodies, being composed of the most perfect substance, ether or the quintessence, were not subject to alteration and decay as were sublunary bodies which were composed of the four elements, fire, earth, air and water. Aristotle elaborates on this idea in his *De Generatione et Corruptione*, *Physica,* and *De Caelo*. For *De Caelo*, see that work translated by J. L. Stocks in *The Works of Aristotle*, edited by W. D. Ross, Oxford: Clarendon Press, 1922. *Cf.* for example, Book I, Chapter III. That the Fifth Essence is not subject to alteration and decay.

Whereas the Hermetic Tradition considered the celestial bodies to be divine, most medieval Aristotelians did not. [However Aristotle may have considered them divine. See page 4, note 4.] They held a more scientific and philosophical attitude which viewed the celestial spheres but especially the Sun and Moon to be the agents whereby alteration and the other kinds of motion were effected. This point of view could be (and was) viewed as complementary to the more religious, magical Hermetic view.

"Neither angels, nor the Son but only the Father. . ."[1], because all inferior, elemental bodies are composed of the four elements, which are corruptible; and that this is true no one has any doubt. But the celestial bodies are composed from another essence, which is different from those four elements, namely the fifth essence,[2] which is incorruptible and does not suffer. For if the [celestial bodies] were from these four elements, they would suffer and alteration would occur to them and doubtless [also] increase and decrease, just as happens to those inferior, corruptible bodies. And therefore this has been said, that the super-celestial bodies are from the fifth essence or matter. And those bodies are moved by a natural motion, as has been seen by certain men, and it has [also] been seen by certain men that they are moved by a voluntary motion[3] because they are mobile and not mutable by changeable, alternating motion, and they are lucid and round, indeed spherical, and this form is the most noble before all others. And the mutations, alterations, and conversions happen by the motion of the stars, enveloping,[4] moving, and corrupting the elements from their boundaries,[5] as has been said, a ceaseless revolution which is not

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[1] Matthew 24:36

[2] *quinta essentia.* See page 3 note 2 above.

[3] Voluntary motion implies that the stars are living conscious creatures for Bonatti or, at least, for "certain men." [Additional by RH] See our appendix to Book I of the *Tetrabiblos*, the fragment from the *Planetary Hypotheses.*

[4] The celestial sphere envelopes the elemental sphere of fire, fire envelopes air, air envelopes water, water envelopes earth as he points out at the end of this chapter.

The doctrine that mutation and alteration in inferior things are brought about by celestial motion is set forth in Aristotle's *De Caelo, Physica, De Generatione et Corruptione,* and *Metaphysica.* In regards to the last, see *Metaphysica, op. cit.*, Book Lambda, 8, section 1074 a, line 30 ". . . the end of every motion is in one of the divine bodies which move through the heaven."

[5] This is a reference to the doctrine that each of the elements has its proper place in the universe and its own proper motion. Ether is located in the superlunary sphere where all of the bodies are eternal and unchanging. Ether in turn surrounds and encompasses the sublunary sphere in which the lower four elements are arranged in concentric spheres with fire as the uppermost, then air, water and earth. When any one of the elements is disturbed from its proper place it seeks by its proper motion to return to its proper place. The proper motion of the ether is to move in circles, and that of fire to rise in a straight

finished, nor will it ever be except as it has been said above. It has been said philosophically that the terrestrial motion is joined to the celestial world; however, it ought to be understood metaphorically, not absolutely, and therefore there occur in this corruptible world mutations and alterations and corruptions. Because solidity reaches to the elements and that surrounds fire, and certainly the fire surrounds the air, and the air the water, and the manifest earth and water the earth; and thereby the corruptions of the elements and of individual elements happen.

That the Stars Imprint [Their Influences] on Inferior Bodies and that the Mutations Which Happen in This World Happen by the Motion of the Stars.
Chapter II.

First Principles ought not to be proven, but supposed, because to the One Principle which is before all things, all principles other than the first are reduced. Indeed, I do not believe that anyone doubts but that the motion of the surrounding heavens changes the elements, namely fire and air; and that these two change the other elements, water and earth, and all animals and vegetables and other living things which have existence under the sphere of the moon and exist in these, and all things sustaining change or alteration.[1] [This is] because the Sun and air operate on all terrene individuals, which is evident, and also on all the parts of individuals, and because alteration does not happen to the earth except from the mutation of the Sun through the signs,[2] that is the four

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line. It is the same with air which rises in a straight line until it reaches just below fire. Earth sinks in a straight line to the center of the universe as does water to the sphere just above that of earth. [RH]

[1] This is based on Ptolemy's *Tetrabiblos*, Book I, Chapter 2. [RH]

[2] *Cf.* Aristotle's *De Caelo*, see that work translated by J. L. Stocks in *The Works of Aristotle*, edited by W. D. Ross, Oxford: Clarendon Press, 1922. The sky's role in heating inferiors is discussed in Book II, Section 7. The sky's, Sun's and the seasons' roles in producing alteration in sublunary bodies by heating the elements thus producing alterations in them through altering the proportion of Hot, Cold, Wet and Dry in them, is discussed in *De Generatione et Corruptione*, especially book II. 336a.

times of the year which are spring, summer, autumn, and winter. This appears manifestly in the fruits and foliage of the trees and even in animals, which are joined together in other times of the year, and are moved to the generation of their species, but much more in the spring than in the other times of the year; fig trees and shrubbery and indeed, if it is present, the fruit of vegetables is manifested. And indeed we see that from the diurnal rotation [of the heavens] the earth grows warm, is made cool, dry, and moist. And we see also likewise in certain times of the year an excess of waters and other mutations which happen on account of the circular revolution of the acting heaven, and thereby occur alterations of all things placed on earth, and especially in the waxing and waning of the Moon's light, because she is closer to the earth than the other stars and her impressions are felt more. [It happens] in the same way, from the heat of the Sun, which is felt more than all others, although, by chance, the other planets sometimes increase his efficacy; and sometimes they diminish it each according to its nature, according as they are applied to him or him to them. But the impressions of the other stars are not felt in this way, but their effects appear for a longer time. The effects of the Sun appear manifestly in the branches and foliage and the fruits of trees and herbs, and even in those things which are disseminated and planted, more manifestly than in other things because, although they work [in other things], they are not able to appear so manifestly to the ordinary man. They are known however to the man experienced in the sciences. But the other stars act with the planets through the mode of motion and generation.

In What Way the Science of the Judgments of the Stars is Discovered and How It Is that It Is Able to be Excused. Chapter III.

Concerning this science, it is certain that we are able to know not only the understanding of present things but also the recollection of things having already occurred and the foreseeing of the future, both for the individual and for the two parts of the universe. Indeed by means of the subjects of this science, their effects and their utility are known, although by chance certain unseeing people may say that Astronomy is nothing. It is certain that it is one of the 4 branches of mathematics, namely the nobler [branch]; and if it is nobler, it has more noble effects and its utility is greater just as is said in that which follows: because the

subjects of the other mathematics are beneath[1] the subject of Astronomy. Indeed, the subject of Arithmetic is number, of Geometry is measure, of Music consonance. As is said elsewhere, [these] are the more noble because of their demonstrations. But the subject of Astrology is the quality of motion of the supercelestial bodies. The astrologer knows what kind of motions all the supercelestial bodies have. If he knows the qualities of the motions, he knows what kind of impressions they impress and what are the kinds of significances of them and all the things which happen on the earth in accordance with the natural order and in the other elements by the motions of the supercelestial bodies, which it seems no one doubts[2], unless he might be by chance an idiot or a fool. And these things are known by the astrologer for the aforesaid reason. Therefore everything which happens at the present time and which has happened thus far and which will happen in the future can be known by the astrologer, since he knows the qualities of motion which were, which are, and afterwards will be, in which times they will be, and what happens from these effects.

Against Those Who Say that the Science of the Stars[3] Is not Able to be Known by Anyone. Chapter IV.

Those who say that this science ought to be held in low esteem [hold that] although the astrologers discover some worthless things, they may

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[1] This is meant figuratively as relates to order of importance, and also literally.

[2] A contemporary of Bonatti's, the Franciscan Roger Bacon (1214?-1294) wrote, in his *Opus Tertium*, "It is manifest to everyone that the celestial bodies are the causes of generation and corruption in all inferior things." See *Opus Tertium*, in *Fr. Rogeri Bacon, Opera quaedam hactenus inedita*, edited, by J. S. Brewer, London, 1859, cap 30. p. 107. Can be found at Osler Library, McGill University, Montreal, and the CCNY Library, NYC.

[3] This phrase,"the science of the stars" is a direct translation of the Arabic. In Albiruni Astrology is distinguished as *'ilm al-tanjim* (the usual word for astrology) and *'ilm ahkam al-nujum* (literally, the science of the judgments of the laws of the stars = judicial astrology). *`ilm* = science. *al-tanjim* = of the stars.

be condemned. Their first point is that the science of the stars is not able to be known in whole. They say that the empyrean heaven is full of stars and that it influences and imprints just as the other stars influence (just as there are fools in tunics). And they say that the astrologer does not make any mention concerning them. Therefore it seems that the science of the stars may not be known in full. It seems to me that it may be responded to them in one way, to wit: That they do not prove that it is so, and thus their contradiction is nothing. But if we would desire to grant, off the record, that it may be so, it seems to me that it may be able to be responded to them that, although their objections may have appearance, they do not, however, have existence: If the ninth heaven is full of stars, as they say, there is no motion in it, as has been said.[1]

Besides, all of its parts are equally powerful, nor is one part able more or less than another [to effect anything], and thus it is fitting that equally and everywhere, with all its points, it influences or imprints because all its regions and parts are co-equal and equally strong. Neither do they differ in light[2] nor in number nor in any virtue, nor may they be moved from one place into another place, nor to a place [sic]. But the parts of the other heavens[3] differ in light, number, and virtue. For

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[1] For example, Aristotle *Physica*, *op. cit.* Book VIII, section 258a-259a. *Cf. The Sphere of Sacrobosco and its Commentators*, by Lynn Thorndike, Chicago University Press, 1949, p. 119.

[2] Light was believed to be the means by which astrological influence was able to reach earth from the heavens. This doctrine has antiquity originating with the Greeks of the Hellenistic Age at least. Rays of light were also thought to account for magical effects. *Cf.* Alkindi's *De Radiis* which shows that the science of optics was intimately related to Magic in the Arabs' minds and in the mind of the ancients. Alkindi's Arabic work has been lost, I believe, but we have a Latin translation of it entitled, *De Radiis Stellacis. De Radiis* has been published in the *Archives d'histoire doctrinale du Moyen Age,* vol 41, 1974 and edited by M. T. D'Alverny and F. Hudry. The Latin in turn has been translated into English by your translator and it is Volume I of the Latin track of Project Hindsight. This Light Metaphysics shows up in Roger Bacon's writings and in those of Kepler (*De certioribus fundamentis astrologiae*) as well as in Placidus' *Primum Mobile.*

[3] The idea here is the ninth sphere, the primum mobile, has no differentiation of light (in fact no physical light at all) and turns at a constant speed. Therefore its effects are uniform and invariant. For this reason it can be

the greater virtue of whatever [cause] is gathered in different places. The splendor or the light of whatever one of the seven planets has been collected into one body[1] sensibly. But the light or splendor of the 8th heaven has been scattered in diverse places or assigned by the First Cause to sensible bodies in diverse parts of it for the purpose of diverse operations, and thus they are able to imprint many and diverse significations accordingly as the First Artifex constituted them from their formation. Identity[2] is preserved in the impressions of the 9th heaven, but identity is not preserved in the impression of the other heavens, rather diversity (just as I will tell you) in time and place, and without them generation and corruption could not occur. The impressions of the sensible heavens are perceived according to their diversity. And if one were to receive impressions or an influence which is either different or not different from the 9th heaven, they are not able to influence or to imprint in inferiors uniformly, but in a diverse manner and differently. Nor can the 9th heaven influence or imprint in inferiors unless by the mediating sensible heaven, the impressions of which are manifest. The impressions of the 9th heaven are occult because they are not able to be manifest unless they are diversified; just as when wind or water enters a narrow and restricted channel, it becomes more powerful, and its virtue is more apparent and is felt more; and as water which runs through a mill canal operates more strongly and is more powerful than that which runs through the wideness and spaciousness of a river bed. Just as the light or splendor of the Moon when it should shine through some narrow opening, if it should find a horse having a cramp[3] in its back, and should strike the cramp totally, from this the horse dies thereby. But if the horse should stand completely in the splendor of the Moon's light, so that it is totally gazed at by the Moon, and should be completely covered by its splendor, the Moon will not harm the horse either in the place of its cramp or in any other part of it, nor will the horse be hurt by this, as the physicians testify.

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ignored as a factor in astrology. The other spheres either have stars (the eighth) or planets which have localized light and motions that can be taken into consideration and treated of astrologically. [RH]

[1] i.e., that of the planet itself.

[2] identity = uniformity. [RH]

[3] *ficta*. Niermeyer's *Mediae Latinitatis Lexicon Minus*, Fasc. 1-6 *Ab-loquitatis*, Leiden: E. J. Brill, 1976, gives "stitch in the side" or "cramp."

Besides they can be opposed in this manner, that there are none who condemn astrology now except certain men who call themselves Theologians (since they are such as they are). These say that the Astrologers do not know the whole of Astronomy, and since they do not know it in toto, they are not able (according to them) to judge nor predict anything regarding the future, since the stars are as it were innumerable, and the Astrologers only make mention of 1022[1] of them, aside from the planets.

To which it may be responded that although the astrologer does not mention all the stars, because it would be extremely prolix, nevertheless he uses them all because he uses the twelve signs, under which almost all the stars are comprehended.[2] And it can be said to them that indeed they do not know the whole of theology, but still they preach[3] the whole day long. If they preach knowing only a little theology, all the more is the astrologer able to judge by knowing much astrology. Nor indeed is so little able to be known concerning astronomy; but however much it is which is known, it is still more than can be known about theology. Indeed the First Cause is greater with respect to the heaven than the heaven is to a mustard seed. And the astrologer knows more concerning heaven than a mustard seed. Those theologians do not know as much with respect to God as a mustard seed. Therefore it stands that the astrologers know more concerning astronomy than the theologians do concerning theology, and are therefore much more able to judge than the theologians are to preach.

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[1] *Cf.* Ptolemy, *Almagest*, Book VIII, Chapter 1, page 258 *ed.cit.* where the total number of fixed stars catalogued is said to be 1022. Unfortunately this cannot be taken as proof that Bonatti knew the *Almagest*, since Al-Biruni, who Bonatti cites as a source, mentions the same number of stars in his *Tafhim*. This is the Arabic short title of the book and I will henceforth refer to Al-Biruni's astrological work as the *Tafhim*. See, *The Book of Instruction in the Elements of Astrology*, translated R. Ramsay Wright, London: Luzac and Co. 1934, paragraph 162, p. 76.

[2] This of course ignores the sidereal-tropical issue. If the zodiac is tropical then the stars are not in fact accounted for. This kind of confusion about sidereal versus tropical is characteristic of much of the astrology of ancient and medieval times. [RH]

[3] Bonatti plays on the word *prædico*, which means 'to mention before hand' or 'predict' and also 'to preach' or 'admonish'.

Indeed, the astrologers know as much concerning astronomy as the stars and the sensible heavens are able to imprint and to signify. However, concerning that empyrean heaven or the unmanifest[1] heaven, [there is] nothing [of signification] for the astrologer and nothing for judgment, nor for the motion of the stars, nor for those things which come to pass from them.[2] For that heaven, just as it is immovable and immutable, so it also not active, because stars do not act on these corruptible, inferior bodies in this world because they are stars, or on this world because they are supercelestial, but on this world because they have motion and because they are moved.

Against Those Who Say That the Stars Do Not Have Anything to Signify Concerning Generation and Corruption nor Anything Which Happens Concerning These Things on This Side of the Moon.
Chapter V.

Another occasion is when those who have said that the planets or other stars do not have anything to signify concerning generation nor corruption, nor anything which occurs on account of these things below the sphere of the Moon. To those it is answered that all the wise are in accord on this issue, that inferiors are ruled by superiors. Not that the stars rule men, or horses or ships, or chariots, or other corruptible instruments in the manner by which men who are corruptible rule those things (for it does not come that the effect is in concord with the dignity of its cause), but they rule them by moving and corrupting the elements[3] and by converting them, and generation and corruption occur from these latter. And they make individual things from the elements which are corrupted. Finally, the individual things are corrupted and return to the elements, as they say.

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[1] literally, "insensible heaven."

[2] *De illo autem celo empireo sive insensibili nichil ad astrologum et nichil ad iudicia nec ad motus stellarum nec ad ea que concidunt ex ipsis.*

[3] See above page 4, note 4. *Cf.* especially *De Caelo*, Book II, section 389a, lines 10-35, and *De Generatione et Corruptione,* Book II. Here, in this chapter, we have the most succinct explanation that one could hope for of how the Medieval mind explained astrological influence.

Against Those Who Say that The Planets Have Signification Concerning Universal Things Only. Chapter VI.

Another occasion is that of which those who say that the planets have signification of universal situations only and not of particulars. To these it ought to be responded that every individual thing from the elements is constructed from the four elements, and the elements constitute that thing. Nor would they be able to constitute that thing unless they were corrupted by the planets, the other stars not excluded, by the continual and relentless revolution of the stars moving around the elements. Because if the planets were to signify universal species, as they say, and if it were true, it would be fitting that they should signify individual species and not only individuals, but the parts of individuals, such as hands, feet, head, and the like. And indeed, the planets make individuals grow, be increased, grow old, and become ill, and the like by the corruption and conversion of the elements, and again to be corrupted and to return to the elements.

Against Those Who Say that the Stars Signify Only Two Things: The Necessary and the Impossible, but not the Possible. Chapter VII.[1]

Another occasion is when certain men say that the stars signify only two things: necessary things and impossible things, but not possible things; the necessary, such as that fire is hot, the impossible, such as that a horse flies, but not the possible, such as that a man be moved or

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[1] This chapter builds on ideas ultimately derived from Aristotle's *Prior Analytics, On Interpretation,* and *Categories.* As these works were not known to the Europeans in the early Middle Ages, we should rather look to Porphyry's (3rd cent.) *Isagoge.* Knowledge of Greek Science and Philosophy was dominated by the Neoplatonic Tradition (especially, it seems, of the Syrian School). It was through Porphyry's (3rd cent.) *Isagogue*, an introduction to Aristotle's logic, that the Philosopher's ideas were known in the early period. *Cf. Porphyry the Phoenician: Isagogue,* with translation, introduction and notes by Edward W. Warren, Toronto: The Pontifical Institute of Medieval Studies, 1975, esp. the introduction.

that he writes.[1]

To them it is able to be answered in this way: Clearly, there are certain necessary things and there are certain impossible things. Indeed, certain things are necessary, such as that heaven is turned by its own nature; and certain things are impossible, as that fire may be cold by its own nature. Again, certain things are possible, as that water may be hot by accident and not by its own nature. And it is possible for a man to speak by his own nature, and to speak now, and that he may have spoken hitherto and that he may speak in the future; but although he may have spoken in two times, then and now, it is not necessary that he speak in the future. What is necessary or natural of any species is characteristic of any individual whatever of that species, such as to fly, because this, to be able to fly, is found in every individual of that species. What is possible for the species is possible for any individual of the species. Whence it appears that [while] it is possible, it is certainly not necessary that a man swims, nor is it impossible that a man swims. Whereby we see that [while] certain men swim, others do not. And it is possible that this man, when he is born, is king, and it is possible that this same man is not king. If, however, he were not the king, it would be impossible for him to be the king. However, between the necessary and the impossible, the middle is the possible; and between the necessary and the possible, there is judgment. Therefore, it[2] *is* possible and the judgments of the stars are true and useful because they are natural, whereby they are not causes by accident but from that which is natural to them. Whence judgments ought not to be reputed as worthless as the blind say. And so they have spoken evilly who have said that it is not possible because we see manifestly that it *is!* And so are the works of the stars and the judgments of them.

Indeed it is necessary that when it rains, there is some cloud, and it is impossible that when there is no cloud, it may rain noticeably, but it is not necessary that every time there is a cloud, it will rain; nor is it impossible that any cloud at all can give forth rain. It is possible that

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[1] *Alia occasion est quorundam qui dixerunt quia significant tantum duo necessarium scilicet et impossibile, possibile vero non, necessarium sicut ignem cē calidum, et impossibile sicut equum volar. Possibile vero non ut hominem moveri vel scribere.*

[2] "It" refers to the judgment of the significance of astral influence, which was what the chapter head asserted was not possible, remember?

from that cloud there may be rain, but it is possible that from that cloud there may not be rain. Therefore [rain] is a possible[1] [kind of event] and so are the judgments of the stars, because by the motions and dispositions of the supercelestial bodies, and by the variations of the air, you are able to know from what cloud there ought to be rain accordingly, as it is said in the tractate concerning the mutation of the air.[2]

Likewise when someone has an edible thing in his mouth, it is possible that he may eat it and swallow it; and it is possible that he may not eat it or swallow it; and the possible has regard to both, namely to the necessary and to the impossible, because, if it is possible to eat it, and if he should eat it, the possible has been made necessary, from which it comes to pass into action, and possibility is born away from it; and it has been effected, and accepts the definition of necessity.[3]

Similarly, although it may be possible, if it does not pass into act, it is impossible, and it arrives at the definition of an impossible thing, and possibility is born off from it. And so the stars and the elements have to signify possible things, and not only necessary and impossible things. It is fitting that the astrologer know the truth to predict the future.[4]

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[1] As opposed to a necessary event. [RH]

[2] The *Tenth Tractate* of this work.

[3] This seemingly obscure passage employs scholastic terminology. The 'possible' is not exactly what we would mean by the word. The following definition appears to be the relevant one. ". . . that which is but can be other than it is; in this sense synonymous with *contingent*, and opposed to *necessary*." (Roy J. Deferrari, *A Latin-English Dictionary of St. Thomas Aquinas*, Boston, St. Paul Press, 1960) This passage challenges the idea that astrology only can tell what must be, the necessary, what cannot be, the impossible, but cannot speak of events that are contingent upon something else, until the prior circumstances upon which they are contingent have come to pass. According to these opponents, given alternative possible events (in the modern sense of the word) astrology cannot predict other events which might arise from any of these, until one of them has happened, i.e., become actual.

[4] This entire chapter is framed in terms of Aristotelian logic by Bonatti because his opponents were Scholastics. During Bonatti's day, the Dominican disciples of Aquinas (1225?-1274) were promulgating their master's fusion of Aristotelian Philosophy with Catholic Doctrine. This fusion (Thomism), along with other works by Aquinas, such as *Summa contra Gentiles*, was used to

Against Those Who Contradict the Judgments of Astronomy and Who Condemn It, Not Knowing Its Dignity, because It Is not Lucrative.
Chapter VIII.

Another occasion is of those who say that there is no value in the judgments of astronomy because they do not see monetary advantage. They think to determine if there is any such advantage and how and when. [Seeing there is none], they say this science is nothing. It seems to me that we ought to answer them thus: That they do not care for the grain but only for the chaff. Indeed science is with respect to money as grain is to chaff. Those who say that wealth of money ought to be preferred to the science of Judicial Astronomy seem to show that among themselves nothing is considered so noble as the accumulation of money, which can be easily lost. And they say that he who abounds in riches lacks nothing. If he is not wise, it doesn't harm him. They say that stupidity suffers wealth and the rich fool does not need science, not considering their own errors and not knowing that their false probations are really void.

Every situation which is subjected to examination is proved by something similar. Just as science is proved by science and substance by substance, I most frequently see that the vulgar do not commend anything except the accumulation of money; nor is it to be marveled at, because they see occasionally that there are some wise men, both those who are religious as well as others, who believe in astronomy and medicine as well as in other sciences, pay attention to those whose opinions, if well enough considered, it seems to me, could be upset. Science is most noble with respect to money, and money is most vile with respect to science. Money may be given to wise men, fools, the indolent, upright, lowly, and weak, and also to those reputed worthless.

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convert the Moslems, Jews, and such recalcitrant marginal Christians as were handy, among them Averroists and Astrologers.

Bonatti's *Liber Astronomiae* was written sometime after Thomas' death, and thus in the heat of a rising Thomism. To have any chance of being taken seriously, he has to show himself as a competent Aristotelian. While his argumentation may seem puerile to us, we should keep in mind that he was confronting a real contemporary opposition on its own terms. If we, as Astrologers, want the Art taken seriously today, we must do likewise.

Thus money is as it were worthless, nor would any vile or foolish man having such a wealth of money be said to be anything other than one who guards the money for someone else. Money is not given to him on account of his strength, for we see certain strong men who lack money and certain others who abound in money. Why this is, is dealt with below in the matter about judgment or, perhaps, in the Tractate on Nativities.[1]

There is nothing that is able to render a man famous without higher support save wisdom. Magnanimity[2] is not able completely to ennoble a man without money, because the magnanimous man is not completely able to show his magnanimity unless he may have that which he gives to others. The wealthy man, without magnanimity and the will to do good, is not able to show his wealth because his heart will not permit him to do good. Thus his money is buried treasure. But Science is the only thing which is able to ennoble man without higher support. And thus science is valued before all other possessions[3] and, if he is praised by no other cause, a man is praised on account of science because he is able to be deprived of all other possessions before science. Science is not chosen by anyone on account of strength, nor because of weakness, nor on account of [one's] nation, nor on account of riches, though riches can be chosen for themselves. Nevertheless, the true wise man cares not for these temporal things, which are able to be taken away from him because they are subject to corruption. Thus, the wise man does not care for these things, because he is not praised on account of wisdom, intellect, discretion, and the cognition of things that make a man worthy in nobility. Man is more worthy than the other animals and this only happens because of wisdom, philosophy, and the understanding of those matters[4] which are not understood by the other animals, and through the instruments of reason and reasonableness[5] which are in man; and this is wisdom and the recognition of things; and

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[1] This is a purely astrological argument that one has (or lacks) money not because of any virtue or vice of one's own, but by virtue of one's horoscope.

[2] lit. greatness of soul.

[3] *accidentibus*. This means possessions in the abstract sense. [RH]

[4] It is what we have in our understanding and memory and not on our bookshelves or computer disks which ennobles us.

[5] *ratio*. This word, like the Greek *logos* implies both logic and the ability to calculate.

it consists more in the cognition of those things which have been, are, and will be. And science is an accident[1] such that, the more it is increased in man, the more it removes him from the other animals; and on account of this, which is the soul of science, he is made more worthy and more noble than they, as also by discretion and by the cognition of things which have been, which are, and which will be. The less wisdom there is in him, the more he is removed from reasonableness and the more akin he becomes to the brutes. And he may not be more worthy and noble than the other animals, unless by wisdom and philosophy, and that cannot happen to him except by philosophy; and that cannot happen to him because of the accumulation of wealth;[2] but because of the accumulation of wealth, he *is* able to live easily. However, this is not to live, not to live truly, wherefore Seneca, "Death is sooner without letters and I lived in a human funeral." Whence if a man were not wise, he would no more be dignified than the other animals, because all animals participate with him in other things except in wisdom. They all live, eat, some drink, and some drink and eat, they generate, are born, grow, increase, diminish, grow old, and die just like men. Thus, through wisdom, cognition, and intellect, man has been made more worthy than all the other animals. And if that which makes a man worthy in nobility is wisdom, it is fitting that the wisdom[3] which is nobler and more worthy and higher will make a man more noble and worthy and higher and more intelligent; and that is the science of the future, which cannot be known except by the science of the stars. Therefore the science of the stars is nobler than the other sciences excepting the First Philosophy; nor however is that able to be known nor to be had perfectly unless by the science of the stars.

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[1] *tale accidens.* This is the philosophical use of the word 'accident' denoting a circumstance or surrounding set of events that is not of the essence of a thing. The ability to know may be an essential trait of human beings (sometimes at least), but an actual body of knowledge or *scientia* is an *accidens.* [RH]

[2] *substantiæ.*

[3] such as Astronomy or Astrology.

Against Those Who Have Said that the Science of the Stars Is not Useful but rather Damned because It Induces Sorrow and Anxiety in Those Who Foresee the Future, whence They Suffer from the Causes before the Impediment Happens to Them. Chapter IX.

Another occasion is of those who say that the judgments of the stars are of no value, nor is there any use in them, but rather they are damned, even though this science is true and its judgments are true, still it is rather damned than useful. This is because if any grave thing which will occur to someone is foreseen in advance, it sends fear and sorrow before the time of grief up until the evil thing happens to him. Afterwards it is not at all fitting that he may be sorry or lament or grieve. Nor may the astrologer be able to avert that grave thing which is going to happen according to the stars; and even if he were to be able to avert it, he could not lessen the anger and anxiety which it manifests in him to whom the evil event is to happen up until the hour of its happening.

To such as these we may respond in the familiar way: Namely that they do not know what they are saying, for it seems they ignore whatever dignity there is and what great utility there is of this wisdom, because if they knew they would not speak thus. If, indeed, a particular man were threatened by some evil thing which was going to happen according to the stars, and he foresees this, he will see what kind of evil it is and of what species it is and he will oppose himself to it. Indeed Ptolemy affirms in his *Centiloquy*[1] that the best astrologer will avert many evils which will come about according to the stars. Further occurrences, indeed, are either universal or particular - i.e. universal: such as winter, summer, heat, cold; and distemperences of the air, such as rain, snow, hail, and pestilences such as mortality, hunger, sterility, abundance of earthborn things, and the like. From these universals, certain things are known by the wise, and certain things are known not only by the wise but even by the common man. The wise know them through their endeavors, namely through this science of the stars.

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[1] *The Liber Fructus* or *Book of Fruit or Centiloquium* was formerly attributed to Ptolemy. Richard Lemay believes it the product of the early 10th century abu Ja`far Ahmet ibn Yusef ibn Ibrahim. The *Centiloquium* was translated into Latin in 1136 by Plato of Tivoli.

Laymen and others not experienced in this art know by means of experiences[1] that certain things will be, and they have seen them in their times, and they have heard from others of great age who saw them in their times. Indeed they saw, in the regions in which the horizon is turned back to the north, that it grows colder when Gemini is entered and that it lasts until it enters[2] Virgo, although the time may vary more or less in other places. Whence in the summer when they notice the heat, they say that in such-and-such a time it will be cold; it will snow; there will be rain, winds, and the like. Then they secure themselves with grain, wine, wood, garments, and other necessities by which they are able to fend off adversity in those times. They who do not have houses strive to build them so that they may escape the rain, snow, and other adverse events which, if they should not have seen them in advance, they would not have secured the aforesaid necessities; and thus it could be the cause of their annihilation. Therefore the statement stands that the foreknowledge of the future has value.

Similarly, they know by the aforesaid experiences what time to plant so that they may reap in the future, whereby they can lead their lives according to diverse species of diverse affairs. Indeed they plant trees in those times in which they were used to seeing that they lived according to different types of crops. Nor did they sow or plant any kind of seed or crop at all times of the year equally, nor in every region at the same time of the year.

Some things are planted or inseminated at one time more than another; in one way in Spain, in another in England, in another in Lombardy, in still another in Rumania, in yet another in Apuleia, another in Asia, another in Ethiopia, in another in the Alps, in still another in the plains, in another way in winter or summer; at whatever time is convenient for them and in which it is hoped that there will be utility from them. And according to diverse regions, and diverse situations of place, the experts foresee all these things so that they are very rarely wrong. Therefore the foreknowledge of the future is useful.

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[1] *experimenta.*

[2] This seems to refer to the Full Moon is in Gemini. This, of course, would put the Sun in Sagittarius (beginning around Nov. 23). When the Full Moon is in Virgo, the Sun is in Pisces (beginning around Feb. 19). The weather could begin to get cold in Italy around the end of November and begin to warm up around the end of February.

But when some of those tunic-wearing fools rose up, there was one fool of these who said that these things do not come to pass from the impressions of the planets; whence one must not dispute with them, because they do not consider that any region or site within a region grows warm by the nearness of the Sun and cold by the removal of the Sun from it. And on account of the excessively near proximity of the Sun, a region dries up, and on account of the excessive remoteness [of the Sun], it becomes cold; whence they know that a particular seed or a particular crop ought not to be planted nor sown because of excessive heat or cold; and they use these things because they know in advance that these things will come about thus. This they have seen by long experience and they have used these things. If they were not to know the times to do these things, they would lose their money and their labor.

Certain universal things which happen commonly to any climate and region are able to be avoided and certain ones are not. However, the effects of these are able in some way to be so lessened or changed that there is utility in them for those who foresee them.

It is not possible to know all things but by this science. However, certain of these are able to be known by the experience of medicine, as when Hippocrates says in his *Aphorisms*: "Those things, indeed, which are known by astrologers are not able to be foreknown by the common man."[1] There are many of these: pestilence, hunger, sterility, penury, infirmity, mortality (as much of rational men as of beasts), rain, snow, hail, cold, and excessive heat, and so forth. Against these the astrologer who foreknows is able to guard himself. Thus the foreknowledge of future things is useful and not damned. Unknown evil is not avoided. Known evil, however, if foreseen in advance, especially far in advance, can be avoided. If, indeed, someone foresees that grain will be expensive, he is able to purchase it for himself while it is inexpensive and to save it to such time as it will be profitable for him. The same holds true of wine, oil, and other things. If he foresees that there will be mortality in some region or in some climate, he will be able to remove himself and go out from that region to another in which there will be no threat of the plague in that year. If he foresees that there will be sickness in a particular region, he will be able to oppose himself to

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[1] The attribution of this aphorism to Hippocrates is disputed.

the cause threatening that sickness, or to repair to another region so that he may wait safely; and thus the foreknowledge of that thing is the cause of health of the one foreseeing that danger and the evasion of it.

Similarly if any one should foresee that there was going to be rain, he would be able to flee to his house before it began and get to places in which the rain would not be able to drench him. Likewise if someone should be sailing on the sea and should see that there was going to be wind or other tempest, he would be able, before it began, to repair to a port in which he would be secure, lest he should suffer shipwreck, or he would be able to refrain from setting out at all until the time of doubt should pass. Similarly if a question concerning a sick person should be made, or if the astrologer should know the beginning of the illness, he would be able to know in advance whether the ill person will be able to escape from the illness or perish. If he were to foresee that he was going to die, he would be able to predict death to him. And should, perchance, the sick person not believe that he would die, he would do penance and confess his sins. And Jesus Christ our Lord will provide for him in the life to come, that is in the insensible life. He will be able to make a will, set his house and his things in order, and make arrangements with his creditors and debtors. If he were not able to do this, there might be danger to his survivors and those who ought to inherit his goods, and those whom he did not want to get his goods might and those whom he wanted to get them would not; thus he can be blasphemed and hated after death. For a man at some time esteems one of his heirs more than another; at some time an heir who is male more than one who is female; at some time a natural child as much as a legitimate child.

Likewise, he who enters upon the sea, if an astrologer had not predicted for him, a future tempest might be the cause of danger; thus it is good and useful to know the future and evil, and damned to ignore it. Therefore, these and many other causes are able to be assigned, because it is most useful to know the future of things in advance.

Likewise, it is extremely useful to be able to know the future of certain particular things. So that if the nativity[1] of anyone is known or he has either a universal or particular question[2] about something which

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[1] i.e., the birth chart or natal figure.

[2] That is, an horary figure used as a natal in lieu of such when no reliable birth data exists. This was a technique of Abu Ma`shar's.

he wishes to know, you or some other astrologer will be able to see what will occur to him regarding that thing. Wherefore, if injury is threatened to him, he will be able to escape it. If wealth is promised, he will be able to receive it, and that will be useful to him. And if you may see in any of his annual revolutions[1] that some danger threatens him, he will be able to escape, so that you will be to predict, if it is an illness, the cause of the illness, and so that he oppose himself to it and convert his nature to the contrary cause. [You will also see] what kind of illness will occur, and whence if infirmity will come to pass, or not approach him; or if it does, it will harm him less. Now if he had not guarded himself against it, such an illness might have conquered him and it might even be the cause of his death; or the illness might be chronic and he might die in the end. If there is to be death, the astrologer can predict his death to him in that year.[2] Thus, the ill person may order his affairs just as has been said. Nor is it possible that anyone is seized by sudden death or unexpectedly without the ordering of his affairs both spiritual and temporal. If there may be sickness or death of a brother, or of sons, or of the father, or of the mother, he is able to withstand these things on his own. If there may be death of animals and he has animals, either of the greater kind[3] or of the lesser kind,[4] he will be able to remove them before the beginning of the plague and therefore not lose any of them. By these examples, understand the significations of the various houses.

Likewise, should anyone ask, fearing lest his enemy may insult him, you will be able to predict to him whether [the enemy] will attack him, and [whether] he will be able to fortify himself with friends and arms and the like, so that he may be able to expel the enemy. If he had not guarded himself beforehand, he could have been killed or evilly

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[1] This refers to his solar returns or anniversary figures, from which the events of the ensuing year are to be known.

[2] Aside from what appears to be an example of Medieval advertising here, we note that Bonatti is saying that the astrologer ought to be able to predict the year of death from the revolution. It is perhaps noteworthy that he makes no claims to month, day, or hour of death.

[3] Cattle, horses, etc.

[4] Chickens, ducks, sheep, goats, etc.

treated by his enemy.[1] These and many other particular causes, which can happen to men, are able to be assigned, which is useful to foreknow and not at all damned, as some have desired to say. In the same way as the experiences of the physicians, when they see at one time of the year the corruption of the air by some change of it from one state of being into another, they foresee, by the indication of some wind or much rain, or some other occasion, that there will be a plague such as quartan fever, sharp head pains, oppression of the hearing, inflammation of the eyes, and the like; whence men are able to provide themselves with pharmaceuticals, diet, and the aforesaid contrary causes for the purpose of expelling these injurious accidents.[2] If they did not guard against these things beforehand, they would likely fall into sickness, the plague, and similar things. Therefore, physicians and even common men, because they have seen in their times that the heat increases in the summer, expose themselves in the spring to the hot humors and they draw them off with medicines purging them, lest the heat of summer increase the sharpness of the hot humors, and lest this may be the cause of a death by sickness. Thus the foreknowledge of the accidents of the future is most useful. Because just as the experienced physician is able to preserve the bodies of men from the aforementioned threatening deaths, so the astrologer is able to avert many things that are going to happen according to the significations of the stars, which, if they were not known, would be the causes from which many harmful things would accompany man. And thus it is manifestly apparent that the science of the stars is most useful, and in no way harmful. Whence those who desire to make themselves see the truth are able to know openly that, just as the astrologer is able to foresee the accidents of the future, so he is able to know and to say how their danger may be avoided.

The foreknowledge of future things is useful in two ways: One is certainly that since a man knows that some adverse thing will happen to him, he is able either totally to vitiate it or effectively to diminish it in part. But if it is a useful thing, which will make him to whom it will

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[1] Bonatti deals with this subject at length in Tractatus Sextus. It should also be mentioned that, although Tractatus Sextus assumes that the Astrologer is a military advisor to a Count (Bonatti served Count Guido Montefeltro as such), the same rules can be used for modern urban life, which, due to its increasing barbarity is more and more like the rough-and-tumble life of the Medieval city.

[2] Again, this is the old use of the word. [RH]

occur rejoice, that one will be happy from the hour when he knows that he will obtain the thing he strives for all the way until he has obtained it. If he had not foreseen that he would obtain it, he would be sorry and distressed and fatigued by it and he would make his friends fatigued with it and expend his goods so that he would be able to obtain it until the time should come for him to actually receive it.

But some object to this, that the foreknowledge of some things causes sadness or lamentation after he shall have received the thing because he may not hope for more after it is received. One must say to him, because he is removed from the way of truth, that if, indeed, it were true that after having received something which one desired, sorrow overcame one, it would not be fitting that anyone should enjoy delightful things because those very delightful things do not always last. Man is not saddened after receiving them. Indeed, his mind is quieted by them because that which he desired he has received. For if it were always so that after he shall have received that which he desired he would sorrow, nothing delightful ought to be enjoyed. Moreover a man would not be glad in the embraces of a beautiful woman, nor in conviviality, nor in objects of value,[1] nor in beautiful clothes, nor in the sound of music, nor in worthy things, nor in anything in which his nature rejoices in which there ought to be gladness, because they do not last forever. However, the perfection of joy is when the mind is quiet and it is satisfied with that which it desired. Before a receiving there is no joy but the hope of the coming to completion of the desired thing. Indeed, hope and joy are different, just as fear and sorrow are, because hope and fear are potential, while sorrow and joy are concerned with actual things.

Against Those Who Say That the Judgments of the Stars Are of No Value, nor Elections, Saying that It Is Able to be So Elected for an Enemy as for Him for Whom It Is Elected. Chapter X.

Another occasion is of those who say that the judgments of the stars are valueless, nor are the elections which the astrologers do according to astronomy of any value. There is no wonder if they say this because

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[1] *speciebus*. 'Objects of value' according to Niermeyer. [RH]

they do not see the truth; and in a certain way what they say seems like truth. It seems as though that this condemnation comprehends the others and is superior to all the aforesaid things; neither does it seem, nor do they think that it is possible for it to be contradicted nor resisted. Certainly it seems that if one thing is impossible, another is possible, unless it is just as they say. Moreover they say that you elect the time for one army, and you tell the querent that if he will go forth in such and such an hour, and with such and such a sign ascending, he will prevail. But if the adversary should move his army at that hour, under the same Ascendant, who will prevail? You can say to them that the man who is stronger and who has the greater host [will prevail], but the detractors say that both have equally large and equally strong armies and equally able soldiers and infantry, who will prevail? You say that he who leads his army more wisely [will prevail]. They say that the both lead their armies equally wisely; who will prevail? You say the leader of the army who was born at night. They say that both leaders were born at night; who will prevail? You say that the army will prevail who joins the battle first, and they say that both armies begin to engage in battle at one and the same time; [therefore] who will prevail? And you say that [it will be] he who shall move himself from the east and go toward the west, or from the north and go towards the south, and that the one who moves from the west toward the east or from the south to the north will succumb. Then they will say certain impossible things, namely that either army shall move from the east toward the west or from the north toward the south; who will prevail? At this point you must say to them that they are fools and you ought not to speak to them and that it is impossible that two opposing and enemy armies will move themselves from one place at one and the same time, but that in some way there may be between them some orientality or occidentality or northerliness or southerliness. But they are such fools and blasphemers that have posited that both armies may move themselves from the east, west, north, or south simultaneously, this does not seem possible and it ought to be told them that they posit a thing unseen and unheard of, that both opposing armies will hold their foot in one place when one [army] will begin to go against the other. This is as impossible as for heaven to fall. But tell them that it is posited that heaven will fall while the stars will remain in the sky; and if the heaven should fall, would not the earth be buried? If it is posited that asses may fly, the vulture does not lose his power of flight. However, lest they may say that you failed in your response, you can reply to them in such a way that they will not

have anything further to ask, that you are cutting off all ways of asking, condemning, and blaspheming; and that you are able to respond to them that the one who is supported by the Part of Fortune will prevail and he who will hold his back to the west or the parts more closely adjacent to it, and he who holds his face to the east or his back to the south or the parts more closely adjacent to it; and he with his face to the north will succumb. And he who will hold his back to the east or the parts more closely adjacent to it and his face to the west, or his back to the north and his face toward the south or the parts adjacent to it will prevail. And thus all the ways of the blasphemers and maledictors have been cut off and removed. If it were said again that the Part of Fortune will support him who will hold his back toward the south or toward the west, say that the one on whose side is the Part of Fortune[1] [will prevail] and thus they will cease their objections which, although they seem to have appearance, have no existence.

Perhaps certain fools will rise up unreasoningly, saying, "Why do you who are an astrologer allow any evil thing to happen to you? Since you know all things, you ought to know what will happen to yourselves." To this we respond that such persons include among all judgments events which happen accidentally in almost imperceptible portions of time; just as if a thorn pierces a foot so that the foot is withdrawn and so a man falls, and similar accidental events, about which there is no art, because a judgment is not considered except about those matters concerning which one can deliberate before they happen. Those events, concerning which swift chance does not permit one to have deliberation, are not left for the industry or caution of the wise; for those things which happen by accident are not considered by art, nor by nature, as they believe.[2]

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[1] The idea seems to be that the one whose Part of Fortune is in the North or East of his natal figure (or of the horary/electional figure) wins, or the one who comes from the direction indicated by his Part of Fortune [wins], provided that this direction is not already proscribed. For example, if one comes from the West or South with or without the Part of Fortune behind him, he loses.

[2] the foolish detractors.

Against Those Who Say Universally that There Is no Astrology; and the Demonstration of Its Existence and Nature. Chapter XI.

I said that I was going to speak concerning the judgments of astronomy, and regarding those things which are seen to pertain to judgment. I mentioned this in the beginning of this work. It seems convenient that I now tell you what astronomy is according to how the wise define it, so that it is demonstrated to those who say that it is nothing, and so that they may be able to see clearly that it is something, and it is useful, true, natural, and good.[1] Indeed, nothing is found of natural things which, regarding the law, can be called evil or useless or mendacious or false.

As certain wise men have defined it, astronomy is the rule of the stars. A rule is a correct ordering, and one which manifestly declares that it is what it is according to its own truth. Not that truth may be laid hold of by rule, but that from truth, rule is born. The lawyer, however, without changing the opinion, says, "The rule is the situation which is." Briefly he relates, "Not that Law is raised up from rule, but that the law is made which is the rule."

But certain opinions not far from these define it thus: Astronomy is the science by which the cognition not only of present matters but even of past and future things is given. It is defined also in another manner, according to its two parts or species, briefly, the contemplative and the practical,[2] which are respectively astrology and astronomy. I will tell you the way in which these two parts differ. Astrology,[3] the

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[1] All these qualities were necessary for Astrology's acceptance in Bonatti's day. If found to be false, i.e., philosophically unfounded or theologically unchristian, astrology would have been denied a hearing and even persecuted. If useless, it would have been ignored or ridiculed. If unnatural it would be Magic and severely punished, if evil, a crime punishable by the civil authorities. Bonatti, as a professional, is attempting to ensure his profession's legality and free practice.

[2] *activus*. In this context, opposed to *contemplativus,* it means practical. [RH]

[3] Bonatti interchanges the words "astrology" and "astronomy," as they would be used in modern usage. Something similar is done by Roger Bacon in *Opus Maius ed. cit.* p. 264. "But true mathematicians, whom in this field we

contemplative part or species, is the science of magnitudes of moveable things which inquires carefully by a certain method into the course of the stars and their appearances around themselves and around the earth. This part, namely astrology, has three parts: The first part concerns the number and figures of the celestial bodies, their arrangement in the universe, their quantities, positions, proportions, and quantities of distances between them. The second part concerns all the movements of the supercelestials, how many they are, and that all their motions are circular and which of them may communicate with all the other stars, or which may be nearer, and how many kinds of motion they have, and towards which parts they are moved, which are six, namely forward, backward (and to these are given the names direct and retrograde), up, down, right, and left. Also another six motions are seen, although they are not considered by the astrologer: generation and corruption, and increase and decrease, alteration and change according to place. Some say alteration is not a motion,[1] when it and the similar changes happen according to aspects and conjunctions. The third part inquires about what parts of the earth are inhabited, and about the seven dispositions of the climates, and the variation of the length of the day and night in the various regions.[2]

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call astronomers or astrologers, because they are so called indifferently by Plato and Avicenna, and many others. . ."

[1] Bonatti's source's reliance on Aristotle's *Categories* is most apparent in his almost word for word lifting of Aristotle's discussion of the six kinds of change (*Categories,* 14). Aristotle's text says, "There are six kinds of motion: generation, corruption, increase, diminution, alteration and change of place." Reference to the text cited above will show how closely he is following Aristotle. I do not yet know what Bonatti's source for this citation may be.

[2] *Cf.* Ptolemy, *Almagest*, Book II, Chapter 6, "Exposition of the Properties of Each Parallel where the length of the longest day is given for each of 25 parallels from Equator to 59½ degrees North Latitude and thereafter for various Latitudes to the North Pole." Also see Chapter 8, where Tables of Ascensions are given for the various latitudes. Together these tables permit the calculation of Ascendants and Primary Directions. *Cf. Tetrabiblos*, Book III, Chapters XIII - XV in Ashmand's Ptolemy.

What Astronomy Is: Namely the Practical Part. Chapter XII.

But astronomy is the second part of this science, namely the practical part, although frequently the names astronomy and astrology are interchanged. Concerning this, it is able to be asked, "What is astronomy? What are its species? What is its office? What is its end? What are its instruments? Who is its artist? Why is it called by such a name? By what order is it taught?" Its definition has been given above. But others define it in another way, saying: "Astronomy is the science which describes the courses of the stars and their dispositions according to the opinion of those who are experienced,[1] and describes the knowledge of times of events by the foregoing method."

Beyond this, that which is any one of those parts is recognized according to its definition or what it is[2]; the genus [of astronomy] is that [aspect of it] which responds fittingly concerning a question proposed to itself by judging according to the position of the planets and signs and according to the nature of these.[3]

There are, moreover, many other sciences of judging wherein, according to them, questions are proposed. For instance Geomancy, which is practiced in the earth and many other ways convenient to it.[4] Hydromancy in water, Aeromancy in air, Pyromancy in fire, Cheiromancy in the hand as is testified by Aristotle in his book on Animals,[5] Spatulamancy on the shoulder-blades of some animals. And there are many other sciences of augury, such as the voice of some

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[1] astrologers. [RH]

[2] *quidditate.* [RH]

[3] *Preterea que sit una quequam illarum partium sua diffinitione seu quidditate cognoscitur, genus enim est secundum quia de proposita sibi prout oportet questione respondet iudicando secundum planetarum et signorum positionem atque ipsorum naturam.* [RH]

[4] For the history, theory and practice of Geomancy, see Stephen Skinner, *Terrestrial Geomancy: Divination by Geomancy*, London: Routledge and Kegan Paul, 1980.

[5] Perhaps to Book I, Chapter One of *The Parts of Animals*, but the edition (*The Basic Works of Aristotle*, ed. Richard McKeon, Random House, NY, 1941.) I have omits all but Book I, Chapters 1-5 and Book II, Chapters 1,17,18, 20-23. There is also a Physiognomy attributed to Aristotle.

animals or the songs of some birds or their shrieks, or the speech or meeting of some king; and there are many other arts which could be cited but of which we will at present say nothing.[1] This art, namely astronomy, with all its parts and species is more worthy than the others, since it declares from the arrangement of the most noble supercelestial bodies the past, present, and future of terrestrial things. To this all philosophers agree. Whence Alpharabius[2] says concerning this science, "astronomy, that is, the science concerning the significations of the stars, namely what the stars signify regarding things present, past, and future." Its material or subject is magnitude itself, as has been said.

The parts of this part or species are four. In the first part it treats of the position and form of the universe and the circles of the heavens. In the second the courses or motions of the planets and other stars are dealt with. In the third part the rising and setting of the signs are dealt

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[1] It is difficult to locate Bonatti's sources for this list of "mancies." *Cf.* Isidore of Seville's *Etymologies*, Book 8, on the Magi. Also H. C. Agrippa's 15th century *De Occulta Philosophia*, translated by James Freake, Cthonios Books, 1985. Book I, chapter 57, has a number of ancient Latin authors, notably Numa Pamphilius, Varro and Lucan, whom Bonatti may have known as well as a certain Almadel the Arabian. The most likely of these to have been the ultimate source for this material in Bonatti is Marcus Terentius Varro (16-27 B.C.E.) who was quoted extensively by the Church Fathers. [Additional by RH] There is also now an edition of Agrippa from Llewellyn Publications, 1994. It is also based on the Hastings translation.

[2] Al-Farabi = Muhammad ibn-Muhammad ibn Tarhkan abu-Nasr al-Farabi (870?-950). A Christian of Turkish descent, he was one of the first Arabic authors to introduce a knowledge of Aristotle and Plato to the Arabs. He harmonized Greek philosophy with Islam and influenced Avicenna and Averroës. His works were translated by Gerard of Cremona in the 12th century. As one of Bonatti's sources he is important not only for his Aristotelianism but as a source of Neoplatonic thought as well. Bonatti's contemporary, Roger Bacon (1214?-1294), who quotes Alfarabius in his *Opus Maius*, (translated by Burke, University of Penn. Press) said, "Philosophy has come down to us from the Arabs." He refers to the Neoplatonized Aristotelianism of such Arabic writers as Al-Farabi. Al-Farabi influenced Siger of Brabant (1235?-1281) who argued that Albertus Magnus and Thomas Aquinas had misinterpreted Aristotle, while Averroës had him right.

with.[1] In the fourth part, it treats concerning the eclipses of the Sun and Moon and the other planets.[2] Almost all the virtue of astronomy is constituted in or from these parts. Its species are universally two: namely number or computation, according as it has dependence upon the first science, namely mathematics, that is, arithmetic, which is before all other doctrinal[3] sciences because all the other sciences of mathematics require it, but it requires none of these. The second species of astronomy is judicial.[4] Computation and number revolve around definition or understanding of tables,[5] but judgment revolves around the understanding of times, places, signs, the positions of planets, and their aspects and the like and what happens from them. Its office is to observe the courses and conjunctions of the other stars, their aspects, the angles, and the signs succedent and cadent from the angles, and their effects according to the foregoing method. Its end or its use is to be able to know the truth regarding the past, present, and future, by

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[1] *Cf.* Ptolemy, *Almagest*, *ed. cit.* Book II, Chapter 8. Also *Tafhim, ed. cit.*, Paragraphs 222 and 242.

[2] *Cf.* Ptolemy, *Almagest*, *ed. cit.* Books 6 and 13. Also *cf. Tafhim, ed.cit.*, Paragraphs 255-267.

[3] *Cf.* Bacon, *Opus Maius*, *ed.cit.* p. 197: quoting Cassiodorus in his book on mathematics, "We can call mathematics in the Latin speech doctrinal, and although by this term we are able to designate all subjects as doctrinal, yet this science has properly claimed for itself the general word owing to its own excellence." Bacon adds, "Those are subjects of instruction which never fail, deceived by opinions, and for this reason they are called by such a name. While we turn these over in frequent meditation, they sharpen our perception, they wipe away the filth of ignorance, and by the gift of the Lord they lead us to that speculative contemplation. Rightly do the Holy Fathers counsel us to read these sciences, since in great measure by them our desire is drawn away from carnal things, and they cause us to desire those things, which, the Lord alone granting, we can view with affection." We see here pagan Neoplatonic doctrine baptized and, ostensibly, serving Christ.

[4] Bonatti's outline follows Al-Biruni's *Tafhim* more or less.

[5] Another contemporary of Bonatti's was Leonardo of Pisa (c. 1175-1250) alias Fibonacci, who introduced Arabic mathematical methods, the decimal system of notation, including the use of zero as a place holder and Al-Khwarizmi's algebra to the West from Islamic North Africa. Bonatti's math does not reflect Fibonacci's innovations nor any effect of Bacon's advocation of the Arabic math.

judging according to the inspection of the matters described above and examination of the questions.

The instruments of this science are many: the astrolabe,[1] the quadrant, the *armilla suspensoria,*[2] the other armilla,[3] the planisphere,[4] the *curvisphærium,*[5] *statua plosica,*[6] and the like. The artist of this science is called, if you like, astronomer, who practices the art by the name of astronomy and who contemplates the law of the stars according to the foregoing interpretation. I will tell you why astronomy is so called. It is because that name is composed of "*astra*" and "*norma,*" which is a rule;[7] hence astronomy, that is, the rule of the stars, or the practice of the stars or the operation of the stars.[8] But the difference between astronomy and astrology is this: astrology is according to the truth of the thing for the purpose of intellectual or scientific knowledge. Astronomy is for, according to those who believe [in it], the purpose of its effects, or a *scientia operativa.* In what order should this science be

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[1] Described in *Tafhim, ed. cit.*, Paragraphs 324-346. Also in *Almagest*, Book 5, Chapter 1. Masha'allah (c. 740-815 C.E.), one of Bonatti's sources, wrote the first treatise on the astrolabe in Arabic, which was later translated into Latin as *De astrolabii compositione et utilitate* and formed the basis for Geoffrey Chaucer's *Treatise on the Astrolabe.* Abraham Ibn Ezra (1089-1164) also translated Masha'allah's text into Hebrew in the 12th century. Ibn Ezra's works were translated into Latin in the 13th century.

[2] An Armillary which is hung or suspended.

[3] *Cf. Almagest, ed. cit.,* pp. 143-144, where it is called an astrolabe. A good illustration of an armillary appears in *Early Physics and Astronomy: An Historical Introduction*, O. Pedersen and M. Pihl, New York, American Elsevier Pub., 1974, p. 89.

[4] Ptolemy wrote a work on this device entitled *The Planisphere.* It became the inspiration of an appendix to Ashmand's *Tetrabiblos, ed. cit., q.v.*, in which a similar device is described.

[5] Unknown to me.

[6] This may be the device mentioned in *Almagest*, Book V, Chapter 12, for determining parallaxes. If so, a good illustration of it is in *Early Physics and Astronomy: An Historical Introduction*, O. Pedersen and M. Pihl, New York, American Elsevier Pub., 1974, p. 92.

[7] *regula.* [Additional by RH] This etymology is close but not quite. The actual origin of the words is from Greek, the second syllable being derived from *nomos.*

[8] See page 7, note 3 above.

taught? Some say that it ought to be taught before the other mathematics because it is more noble. Some have said that it ought to be taught after Arithmetic because it requires number. Some others have said after Arithmetic and Geometry because it needs number and measure. However, I say that it ought to be taught after all the other mathematics, even after music, even after Arithmetic and Geometry, because it requires harmony as well as number and measure.

That this Science Should Not Be Condemned Since the Holy Fathers Used It.
Chapter XIII.

This art ought not to be condemned, indeed, it is worthy to be commended because the Holy Fathers from ancient times used it. Whence they do evil who condemn it and particularly those who followin the steps of Abraham or who are his followers[1]. Abraham,

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[1] This can only mean Jews. Bonatti's opinion seems to be that Jews ought not to condemn Astrology. Bonatti seems to know Artapanus, a 2nd century B.C.E. Hellenistic Jew, who wrote a work called *On the Jews*, fragments of which are preserved in the writings of the Church Fathers. He held that the foundations of Egyptian culture were laid by the Patriarch and Prophet Abraham, who, when he came to Egypt, taught the Pharaoh astrology. Jacob established the temples at Athos and Heliopolis and instituted far-reaching agrarian reforms. Moses, Artapanus tells us, was Museus, teacher of Orpheus and identical with Hermes Trismegistus (also known as Thoth, Egyptian god of learning). No doubt Artapanus held that the idolatrous practices of the Egyptians were due to an adulteration of the pristine character of the teachings of Moses/Museus.

According to the Talmud, Abraham and his descendants are said to have been elevated above the influences of the stars, but on the other hand, the blessing bestowed upon Abraham in Genesis 24:1 is interpreted as the gift of astrology: "Now Abraham was old, well advanced in years; and the Lord had blessed Abraham in all things."

Astrological consultation is one of the methods suggested by Jethro to Moses for governing the children of Israel. Knowledge of astrology is also attributed to Solomon.

The Prophetess Deborah, according to Kabbalistic tradition, was an astrologer. Judges 5:20 is used as support for this position. I am told by

indeed, instructed the Egyptians and others desiring to know to use particularly the astrology of times and especially Athlanta, who excelled in all the wisdoms of the day so that he was reputed to be like a god. And therefore it has been said that Athlas[1] supported the heaven because he knew more regarding the supercelestial bodies than anyone who was found in that time. Indeed even the Lord Himself when he said to the Apostles "'Let us go on the road to Judaea.' And they said to him,'Now they sought to stone you in Judaea and you walk the road to there?' And he, responding, said, 'Are there not 12 hours in a day?'"[2] as if He had said one hour is good and another is evil, because in the evil hour they had ill will towards him but that hour had passed. Now, however, the good hour had arrived, wherefore He, knowing this, knew that ill will would go from their hearts, He wished to *elect* that hour in which they would not injure Him. And by this it is apparent that He used an election nor did He blaspheme astrology as certain unseeing men and detractors do today.[3] Although it may have been manifestly shown above that much utility and many good things are able to follow from the science of the stars and its judgments, as much in the

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Orthodox sources that the *Zohar* has something to say on this subject but I have not yet found where.

[1] Atlas, who is here equated with Athlanta in the previous story.

[2] John 11:9.

[3] Bonatti's assertion that Jesus Christ was an astrologer is used, of course, to validate the art. This effort may be viewed as a calculated sophisticated shock analogous to Cardan's publishing Jesus' Natal Figure. Yet there are theological nuances which are quite radical here. Bonatti escapes heresy by falling short of asserting that Jesus was not the Son of God, yet one can ask (and we can be certain that contemporary Dominican Inquisitors did ask) why would the Son of God need to elect times astrologically. One possible answer, an heretical one, would have been that he was not "of one substance with the Father, God from God." Such a point of view is unable to be levelled at Bonatti. There is no evidence for it. Still, it would not have been a theological problem for a Moslem, who would view Jesus as a Prophet and Man. A slightly unorthodox Moslem, such as a crypto-Sabæan, could even see a Prophet as an astrologer, just as we have seen certain slightly unorthodox Jews could. A network of such Esoteric Christians could explain the widespread dissemination of Hermetic Gnosis throughout Western Europe in the 10th to 15th centuries. One begins to wonder why Bonatti is so consistently set against the Dominicans. Was it because they ran the Inquisition?

foreseeing of things as in other uses, nevertheless there are certain insipid fools, such as that hypocrite John Vicentinus of the Order of Preachers[1] who said that astrology was neither an art nor a science but that it was a certain kind of application discovered by those who applied it.[2] It seems to me that it is best responded to them thus: They are fools and they err and that they will perish in their foolishness and in their errors. It is apparent to all that astrology is a science and one of the Seven Liberal Arts[3]. Although we have responded to them briefly, it does not seem to me that one may omit proving that astrology is an Art and a Doctrinal Science with sufficient and clear reasons, although the order may seem to be absurd.

For the Purpose of Demonstrating that Astronomy is an Art and One of the Four Mathematics, indeed the Doctrinal Science[4]. Chapter XIV.

That astrology is a science is proved beyond a reasonable doubt. Astrology is the science of moving magnitude, which defines the moving course of the celestial bodies, having inspected them with reason according to the triplicity of time.[5] Or astrology is the science which searches out the course of the stars, their appearances, and

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[1] Dominican Order.

[2] The distinction here is between a true art or science, which has principles and methods following from first principles, versus a mere collection of techniques applied haphazardly, astrology being, it was alleged, the latter rather than the former. This is not unlike the modern distinction between a science and a craft.

Vicentinus' arguments were part of the Dominican's propaganda campaign to discredit astrology in the 13th century and prevent its acceptance as a legitimate science. As a haphazard collection of techniques, it could not be considered a science. This objection is still raised to discredit astrology whenever there is empirical evidence. [RH and RZ]

[3] Grammar, Logic, and Rhetoric (collectively known as the Trivium) and Arithmetic, Geometry, Music, and Astronomy (collectively known as the Quadrivium). Bonatti wants Judicial Astrology to be piggy-backed onto Astronomy, possibly as its esoteric sister Art.

[4] See page 31, note 3 above.

[5] i.e. past, present, and future.

figures round about each other and the earth by means of a required method. Therefore, on this ground, by definition, astrology is a science. The same word "astrologia" is called thus from *astros*, which is a star and *logos,* which is a discourse,[1] science,[2] or method[3] of the stars. Therefore, by this etymology or interpretation of the name, astrology is a science. The same is able to be proven in another way: Everything which is of such a kind that it is from prior, first true things is a science. But astrology has a substantial genus, characteristic and accident by which it differs from other sciences.[4] Besides, everything which is a collection of precepts tending toward one end is an art or science." Astrology is of such a kind. Therefore it is an art or science which St. Augustine proves manifestly enough, saying, "Art is the precept which gives reason and a certain way to acting and speaking."[5] Indeed all the precepts of astronomy tend toward one end: namely to the foreknowledge or to the consideration of present, past, and future things, and the entire purpose of astrology consists in these precepts. Whence Seneca, "To remember the past, to consider the present, to foresee the future, these things are not possible to be rightly attended to unless by the astrologer who has all these things to consider and who alone is able to know them." Besides, if astrology or astronomy were not art or science, that renowned concept that is proclaimed universally by all that there are seven liberal arts would now be destroyed. There would be either six or none at all, because if astronomy were not an art or science, the others would not be either and this would be unsuitable and extremely dreadful. Likewise because astronomy or astrology may be said to be the fourth part of the Quadrivium; and if there is no astronomy, there is no Quadrivium, because with an integral part having been destroyed, the whole is destroyed which would be unsuitable to the highest degree. Likewise if there is no Quadrivium, then there is neither

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[1] *sermo.*

[2] *scientia.*

[3] *ratio.* [RH]

[4] See above page ?, note ?.

[5] It is ironic that Bonatti, as well as many other medieval writers, should quote Augustine to make his point here, since Augustine was an opponent of astrology, at least as it was practiced. As an opponent of astrology, anything he might have said which could be construed to support it would have special weight. [RH]

mathematics nor theory since mathematics is (by philosophic witness) the third part of theory. If there is no theory, there is no philosophy, which is impudent, troublesome[1] and absurd. Therefore astronomy is, by necessity, a science in as much as whoever destroys astronomy, destroys knowledge, just as he who destroys the first principle, destroys wisdom, as Aristotle witnesses in his second book of the *Metaphysics.* Against such men who wish to destroy the sciences one must not dispute because they are worse than the beasts. Besides, since Aristotle, Ptolemy, Iaphar, Ahaydimon, Albumasar, Messahalla, Almetus, Alfraganus, Thebit, Irgis, Ahomar, Dorotheus, Alkindi, Albenait, Astaphaz, Almansor, Hali, Alboali and very many other wise men have written and taught that this science, astrology, *is* a science. There is no likeness of truth if it is not a science, as so many great men have named it. Likewise, everything which posits anything by cause or effect assumes a science, as Aristotle affirms in *De Posterioribus.* The astrologer demonstrates the eclipse by the cause, that is, by the interposition and vice versa.[2] To this extent and from these and many other causes, astrology is manifestly shown to be a science.[3]

Here ends the first tractate on the confirmation of this science.

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[1] *discolus* from *duskolos* in Greek. [RH]

[2] Bonatti wants us to know that he knows that the lunar eclipse is caused by the interposition of the Earth's shadow between the Earth and the Moon and that the Solar Eclipse happens when the Moon comes between the Earth and the Sun. *Cf. Tafhim, ed. cit.* 255-266. Also *Cf. Almagest, ed. cit.* Book VI.

[3] From the length of the chapter and the persistence of the argumentation, we are led to speculate that Bonatti was under fire and in great anxiety about getting a hearing for astrology in a hostile environment.

Second Tractate

Part I: On the Division of the Orb of the Signs and their Being[1] and How They Are Ordained and Disposed and Why There Are only Twelve, Neither More nor Less, and Why They Are Named with Their Names, and the Things Related to These.

I shall speak therefore, following in the footsteps of our venerable predecessors, of things which are useful in this work, remembering their opinions, namely those of Ptolemy, Hermes, Iaphar, Thebit, Alchabitius, Alcaiat, Alchindi, Alenzedegoz, Messala, Adila, Iergis, Albenait, Aardimon, Arestali, and others who studied in this science: adding those things which will seem useful to me according to the grace of composition which God may grant me and return to my memory for me.

On the Division of the Orb of the Signs and That The Signs Are Only Twelve: Neither More nor Less. Chapter I.

Know that the Circle of the Signs is divided into 12 equal divisions, each of which is called a sign. The first of these is called Aries. The second is Taurus. The third is Gemini. The fourth is Cancer. The fifth is Leo. The sixth is Virgo. The seventh is Libra. The eighth is Scorpio. The ninth is Sagittarius. The tenth is Capricorn. The eleventh is Aquarius. The twelfth is Pisces.

But it may be asked, why there are only twelve signs? Many causes could be assigned why the signs are twelve and neither more nor less. One of these (though not one of great force) is that the duodenary is more perfect, as it were, than other numbers, which do not exceed it in unities[2] and the multiplications from which it arises are multiplied

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[1] *Esse.*

[2] *. . .ipsum unitatibus non excedentibus et multiplicationes, ex quibus consurgit in suis partibus, multiplicantur.* Unities are the first nine numbers, or digits in modern terms, which have a special ontological status in metaphysical speculations about numbers. [RH]

among its parts. For it receives in itself more ordered divisions[1] than any other number.[2] It arises by the multiplication of the ternary by the quaternary and by the quaternary by the ternary, and by the binary by the senary and by the senary by the binary and by the same parts it is divided in as many modes.[3]

There is indeed another reason, not less forceful than that given above according to what Arastellus and Albumasar and Aaydemon said, whom none of the Philosophers dared to contradict, namely that all elemented things are composed of the four elements, namely from fire, air, water, and earth and the individual qualities,[4] and all the individual parts [of the world] are composed of the aforementioned four elements. And in each of these four there are three things: namely the beginning, middle, and end, whence the four multiplied by three makes twelve.[5]

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[1] This refers to first order divisions, which are based again on the numbers 1 through 9. [RH]

[2] The preceding is Medieval technical math jargon, which is not of tremendous import for what follows. [RH]

[3] The factors of 12 are 2, 3, 4, & 6; 2x6=12; 3x4=12.

[4] *elementata.* This word has two distinct but related meanings, and it is not entirely clear which one is used through this work. On the face of it would seem that the word is used in its more common sense to indicate material bodies compounded out of two or more of the primary elements, fire, earth, air, and water. But the word has a second usage as well, rarer but possibly underlying Bonatti's usage.

The Latin translators of the 12th century had no word for the 4 primitive qualities of hot, cold, wet, and dry which, according to Aristotelian Philosophy, underlay the 4 *elementa* or elements. They therefore used the word *elementata* to signify the 4 qualities hot, cold, wet, and dry. This usage is documented by Richard Lemay as being found in both John of Seville's (Ioannes Hispalensis) (1133 C.E.) and Herman of Carinthia's translations (1140 C.E.) of Albumasar's *Greater Introduction,* or *Introductorium Maius.* This second usage of the word is more likely to found in works that have an implicit or explicit association with Hermeticism. Your translator, Robert Zoller, is of the opinion that Bonatti was strongly influenced by Hermeticism. Your editor, Robert Hand, believes from the contexts of the word that the first usage is the one that Bonatti intends. We leave it to the reader to decide. [RH and RZ]

[5] Compare this to Ramon Luil who makes the twelve by combining **A B C D** symbolizing the four elements, with **E F G** symbolizing beginning, middle, and end. See the Project Hindsight editions of Ramon Lull's *Treatise on*

The signs are not corrupted, but they corrupt the elements. The four elements are corrupted by the ceaseless revolutions of the signs and planets. Otherwise the elements would not be corrupted.[1] They would remain as they were unless they were corrupted by the stars and their revolution.[2] The revolution of the stars around the elements corrupts them, and they corrupt each other in turn. The more noble ones, namely the active elements, corrupt the less noble ones, the passive elements. For this reason they surround each other in turn. This is the cause of the generation of individual things of all species. The signs were divided according to the number of the four elements because by the four elements which are of four different natures or qualities, the duodenary number of the signs is perceived, because one of the elements is hot and dry, namely fire; another is hot and humid, namely air; another is cold and humid, namely water; and another cold and dry, namely earth.

And although the elements are called composite,[3] nevertheless each of them is only one property.[4] For the property of fire is heat; that of air, humidity; that of water is coldness; that of earth is dryness. Whence it is fitting that the signs should be according to the four diversities which they imprint on inferior things, namely according to hot and dry, hot and humid, cold and humid, and cold and dry, so that three of these [signs] are said to be fiery: namely Aries, Leo, and Sagittarius. Another three of these are said to be earthy: namely Taurus, Virgo, and Capricorn. Another three of these are called airy: namely Gemini, Libra, and Aquarius. [Finally,] another three of these are called watery: namely

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Astronomy, translated by Kristina M. Shapar. Lull and Bonatti were roughly contemporaries. [RH]

[1] The corruption referred to here consists of the elements being disturbed from their natural positions in the sublunary sphere, and being continually mixed and remixed into new combinations. [RH]

[2] The word Bonatti uses is *circumvolutio*.

[3] *complexionata.* Bonatti refers to the Aristotelian teaching that the elements are not simple bodies but are composed of the four *elementata* or primitive qualities of hot, cold, dry, humid (wet). "Elemented bodies" are those compounded of these four *elementata*, or in other words, natural, physical bodies. See also page 39, note 4.

[4] This is the same as Lull's 'proper quality' as opposed to the 'appropriated quality' which is the other, secondary quality making up each element. [RH]

Cancer, Scorpio and, Pisces.[1]

And so it was discovered that the signs should be only twelve, neither more nor less. There could not be more because each of these acts upon the four elements universally, and because each of these acts on the element assigned to it according to the three states of being, namely, beginning, middle, and end. Whence the states of being act on the signs in each element by threes, and there are four elements. Therefore it is necessary that there are 12 signs, neither more nor less. Aries, Leo, and Sagittarius have thus been called fiery. Taurus, Virgo, and Capricorn are earthy. Gemini, Libra, and Aquarius are airy. Cancer, Scorpio, and Pisces are watery.[2]

How the Signs Act on the Elements, and on Which Elements Each of the Signs Act. Chapter II.

It has been said in the preceding chapter that the signs act on the elements. Now it ought to be said in this chapter on which element each sign acts and by which manner. For Aries, Leo, and Sagittarius, since they are fiery, act on the fiery element, but in diverse ways.

[Concerning the Fire Signs][3]

On Aries. Because Aries acts on the fiery element by imprinting on it temperate heat and dryness, that which it causes by its temperateness is the beginning of a natural motion[4] in the individual of any species, namely to make one animal [be] with another so that individuals of the species are generated from other individuals of the same species in

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[1] He must assert that the elements are not in the sky (which is composed of the fifth essence) but *ordered* according to the patterns of things in heaven. [Additional by RH] The signs are classified according to their effects.

[2] The author implies that the elemental attributions of the signs are merely correspondences of the material elemental realities.

[3] This title does not actually appear in the text. [RH]

[4] Throughout what follows Bonatti relies heavily on the Aristotelian Theory (modified in Ptolemy's Astro-physical Philosophy) of motion being the cause of change and hence of all coming to be and passing away.

order that the species is preserved by a succession. This is because species are not preserved for any length of time by means of individuals since they are lacking with respect to extension and [duration] of time. And so [species] would be destroyed and would perish unless they were preserved through succession. And so Aries is the beginning of the natural motion for the purpose of making seeds germinate, for making trees to flower and to put forth leaves and branches, to produce fruit, and for making herbs and seeds which have germinated to be born, increase and multiply, and all vegetables to take up growth and increase. Thus this is the first mode of being[1] through which the fiery signs are said to act and indeed they act on the fiery element.

On Leo. Leo acts on fire by bringing into it intemperate heat and dryness so that from that intemperance comes the beginning of the natural motion that impedes fruit and the foliage of trees and herbs and makes such things decline toward [their] destruction because they mature. Maturation is a kind of destruction, since there are few seeds which then[2] germinate and few vegetables receive increase or growth at that time; and few animals, [because they] lack will, are moved toward the augmentation of their species or toward their preservation. Indeed certain animals begin to hide and seem almost destroyed when Leo does its work on the fiery element; the falling of seeds and their wastage happens, many fruits of the trees are matured and rot; and similar things [happen] because of the impress of Leo upon the fiery element; this is the second mode of being by which the fire signs act on the fiery element.

On Sagittarius. Sagittarius acts on the fiery element by imprinting on it heat and dryness removed from all temperance.[3] Indeed it causes the destruction of seeds and herbs and completes the fall and destruction of the foliage of the trees whose leaves fall in winter, and [it causes] harm

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[1] *esse.*

[2] When the Sun is in Leo.

[3] Whereas Leo was associated with excessive heat. Sagittarius is associated with too little heat. Thus, in Bonatti's mind, temperance is a wholesome, life giving proportion of a vivific quality such as heat. "Remote from temperance" may indicate excess or deficiency: Leo characterizes the former, Sagittarius the latter.

to many animals and the hiding of many species of animals[1] and their destruction; they do not dare to appear above the earth. And this is the third mode of being through which the fiery signs act on the fiery element. And these are the three modes of being through which the signs act on the elements.

All things happen according to this order insofar as it is from the natural signification of the signs and the planets and from this, because superior bodies act on the elements (evidenced more or less at some times and in some places), [all natural change occurs], and although the natural consideration[2] may be seen in another way than this, the cause is always the same.

Concerning the Earth Signs and First, Concerning Taurus

Taurus, Virgo, and Capricorn, which are earthy signs, act on the earth element but in diverse ways. Taurus acts on the earth by imprinting on it temperate coldness and dryness, namely little or no impediment, so that in this temperateness generation of many sensible things happens, i.e., both of species and the growth of vegetables and the like.

On Virgo. Virgo acts on the earth element by imprinting on it coldness and dryness less temperate and closer to destruction, so that from this action a natural motion happens with the result that vegetables suffer detriment and diminution, herbs are retarded, and the leaves of the trees fall and dry up. However it is not so cold and removed from temperance that, even though some things die and are destroyed, nevertheless other things are generated, and certain seeds are germinated and certain herbs are newly born, and grow, and the like.

On Capricorn. Capricorn acts on the earth element by imprinting on it a distemperate coldness and dryness which is destroying and mortifying, and things are not easily generated at this time. Animals, if they are generated at this time are very small and are usually from domesticated animals because of the domesticity of their nourishment. Nor is nature

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[1] Presumably to migration and hibernation. [RH]

[2] *consideratio naturalis.* This is a philosophical term meaning either that consideration which is due to morals or that which is due to nature. The latter is the usage here. [RH]

moved so that herbs are born, or trees grow branches or flower, unless by chance, nor do seeds germinate, and the like.

On the Airy Signs and First, on Gemini

Gemini, Libra, and Aquarius act on the airy element but in diverse ways. Gemini acts on the air element by imprinting on it a temperate heat and humidity strengthening nature, every odor and every odiferous influence. It strengthens the natural heat and temperance of the air in which individuals of species rejoice, and it makes some seeds to germinate, and the like.

On Libra. Libra acts on the air element by bringing into it heat and humidity far removed from temperance, thickening it and making it dense and causing mixture and harm to individual species, seeds, herbs, and the branches of trees and their fruits, and making them full of dense and noxious vapors.

On Aquarius. Aquarius likewise acts on the air element by bringing into it heat and a distemperate, noxious, and impeding humidity; making it annihilate and destroy individuals of species so that much of the harm which animals, seeds, and all vegetables receive from the air, their death and the impression which happens to them, is from the impressions which Aquarius makes on the air and the like.

On the Water Signs and First, On Cancer

Cancer, Scorpio, and Pisces, which are the water signs, act on the water element but in different ways. Cancer acts on the water by imprinting in it a temperate coldness and humidity through which there happens a motion of nature for giving pleasantness and nourishment by which animals and all plants are nourished and live.

On Scorpio. Scorpio acts on the water element by bringing into it humidity and coldness far removed from temperance. By this there happens a motion of nature more for corruption than for nourishment or conservation. On account of the corruption and brackishness which Scorpio causes in water, strengthening few things, it offers very little nourishment.

On Pisces. Pisces acts on the water element by carrying to it a distemperate and harmful coldness by which is caused a motion of nature for the annihilation and destruction of animals and seeds and almost all vegetables on account of the corruption, bitterness, and fetidness which the action of Pisces brings to water.

This is the cause of why the signs are only twelve; neither more nor less, because the elements are only four and the signs act on the elements in three modes. The first mode[1] is nourishing and productive of growth. The second is neither totally nourishing nor totally destructive. The third is destructive. These three contain in themselves the beginning, middle and end. Each of the three signs act on one of the four elements but the three fire signs act on fire according to the three modes mentioned. Likewise the three air signs, the three water signs and the three earth signs. And on account of this Ptolemy, Aaydimon, Astaphan, Arastellus, Albumasar, and the other Philosophers agreed that there were four triplicities of the signs. Each three signs of the same nature act on the element assigned to that nature: namely fire on fire, air on air, water on water, earth on earth, and for this reason there can not be more or fewer.

There is another reason why the signs were only twelve. The Zodiac consists of four quarters, two of which are North and two South. One of these quarters is given to the fiery signs, one to air, one to water, and one to earth. Each of these contains three signs according to the aforesaid natures of the aforesaid four elements.[2]

Why the Elements are so Disposed and Ordered. Chapter III.

It was told in the previous chapter on which element each sign acts and by which means. Now, however, in this chapter it must be told why the four elements are so disposed or ordered. For instance, fire is in the

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[1] *esse.*

[2] The North East quadrant begins with Aries, a fire sign. The North West quadrant begins with Cancer, a water sign. The South West quadrant begins with Libra, an air sign, and the South East quadrant begins with Capricorn, an earth sign.

upper parts of the concavity of the globe of the Moon. Immediately under it is air. Immediately under that is water; then earth.

For the Demonstration that the Elements Are Only Four, Neither More nor Less.
Chapter IIII.

It was told in the previous chapter how the elements are ordered or disposed. Now in this chapter it must be told why there are only four elements, neither more nor less, although many things which have been said regarding these and which are being said regarding these may not seem to be pertinent to the astrologer, mention cannot but be made of these things. It behooves us to make mention of all of these, because the elements very often relate to our work. The elements, in fact, cannot be more or less than four because every elementated[1] body is made up out of the four elements and has in itself the four qualities: hot, dry, cold, and humid; and the four accidents are characteristics of it: namely, generation, duration or conservation, corruption, and destruction. Speaking thus, a thing is generated most powerfully by heat; because of dryness it endures; because of humidity it is corrupted; and by coldness it is destroyed. Understand these things clearly. These four modes of being[2] abide[3] in each thing. Concerning each elemented thing, heat is drawn from fire, humidity from the air, cold from water, and dryness from the earth;[4] whence, since the accidents of elemented things are not found and do not exist except as four, and they are drawn from the elements, it is fitting that the elements be four, neither more nor less.[5]

The elements as they are in their spheres are simple or pure. They have simple qualities flourishing in them, to wit in fire, heat; in air, humidity; in water, cold; in earth, dryness. But as they are co-mixed and involved with each other, they have compound qualities. Thus, fire becomes hot and dry; air becomes hot and humid; water becomes cold

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[1] *elementatum,* singular of *elementata.* See page 39, note 4.

[2] *esse.*

[3] *versantur.*

[4] Here again we see the same principles as in Lull's 'proper qualities.' [RH]

[5] *unde cum accidentia elementatorum non reperiantur, nec sint nisi quatuor.* I have deleted the double negative in order to make the idea clearer.

and humid; and earth, cold and dry.[1]

Why the Signs Were so Ordered or Disposed. Chapter V.

It has been said in the preceding [chapters] why the signs are only 12 and neither more nor less; and why the elements are only four. Now, however, it remains to say in this chapter why the signs are so ordered or disposed. The order or disposition of the signs begins from the fiery signs, as Aaydimon and Albumasar have posited, and a fiery sign was placed at the beginning; then an earthy sign; then an airy sign; and then a watery sign. But you are able to say, "Why did not the wise order the signs according to the order of the elements by beginning from fire and going next to air, then to water, then to earth as the elements are posited successively in their own order?"[2] But the reasons why the wise were moved to order them thus are many. One reason was that the elements (as has been said) receive corruption and alteration from the motions and continual ceaseless revolution of the signs and heavens. From this corruption and alteration are made the four [accidental] qualities which befall the elemented bodies, namely generation, conservation, corruption, and destruction. And because generation is more noble than the other qualities of elemented things, the wise began from signs by which generation or the movement of nature to generation happens, and these are the fire signs. And the quality which

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[1] So what Lull calls 'the appropriated quality' is one that comes about in the element from being involved with other elements. [RH]

[2] Bonatti here attempts to deal with the logical and natural inconsistencies that arise from the order of the elements in the signs. Your editor believes that the problem arises from an original confusion that arose when Vettius Valens' stoic elements (Fire = Hot, Air = Cold, Water = Wet, Earth = Dry) were replaced with Aristotle's elements (Fire = Hot & Dry, Air = Hot & Wet, Water = Cold & Wet, Earth = Cold & Dry) in the signs of the zodiac. Notice that the medieval proper qualities are not the same as the single qualities of the Stoic system. The result is that the ordering of the elements using Aristotelian elements causes an elemental order in the signs which would seem to be inconsistent with the principles in Aristotle's *De Generatione et Corruptione.* [RH]

is noble after generation is duration or conservation, and that happens from signs through which the motion of nature to conservation or duration happens, insofar as corruptible things receive duration; these are the earth signs. But the quality which is ignoble and follows duration is corruption, and that happens from signs by which nature is moved toward corruption, and these are the air signs. And a more ignoble, indeed the worse yet quality which is after corruption is destruction. This happens by the signs by which nature is moved toward destruction, and these are watery signs.

Another cause why they ought to have begun from the fire signs and ended with the water signs is that heat and cold are active,[1] but dryness and humidity are passive.[2] Since heat is the stronger agent which has to signify generation, it was properly set above [other] agents. Likewise because dryness is strongly passive, it was with merit put before the other passive qualities. Because generation precedes duration, signs signifying generation were set before those signifying duration; and because corruption precedes destruction, signs signifying corruption were set before those signifying destruction. And since generation is the beginning of everything generable or endable, the signs signifying destruction, namely the water signs, were posited last. Moreover, the fire signs were posited in the beginning because heat conquers in fire, by which vivification happens, which is the noblest thing. The earth signs were placed immediately next to the fire signs because of the affinity which they have with fire through the dryness

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[1] *agunt.*

[2] *patiuntur.* As we have seen in the text above, Bonatti is passing along to us the Aristotelian-cum-Stoic elemental theory that the elements consist of active and passive qualities. Here he is exploiting that theory to explain how the passive qualities of the elements, specifically the passive quality of fire which is dryness, is the root of the preservation, or, as he terms it, conservation of things. Thus, the primitive qualities of the fire sign Aries, namely heat (active) and dryness (passive), generate and preserve things. Taurus, the second sign, is an earth sign and its role in the economy of nature is to preserve what has been created by Aries. This it accomplishes through its qualities of cold and dry. Dryness is a link between Aries and Taurus and in Bonatti's view permits the preservation of things generated. This doctrine has the hallmarks of Harranian Sabianism and is reminiscent of the alchemical doctrines of Jabir al-Hayyan. Bonatti's sources are Aaydimon and Albumasar, who was a major proponent of Harranian teachings.

powerful in them. The water signs were placed in last place so that they would oppose the fire signs because they are of an opposite nature. And the air signs were placed before the water signs immediately next to them on account of the affinity they have with them from humidity. And so both active qualities were placed in the extremes, and the two passive qualities between them. And these are the causes which moved the wise of this profession to making this the order of the signs, namely putting the fire signs ahead, then the earth signs, then the air, and then the water signs: Aries overseeing the fire signs, Taurus the earth signs, Gemini the air signs, and Cancer the water signs on account of the reasons assigned above.

Why the Enumeration[1] of the Signs Begins from Aries and not from Some Other Sign. Chapter VI.

It has been said in the preceding chapter why the signs were ordered the way they are. In this chapter it must be declared why the enumeration begins from Aries and not from some other one of the signs, since the heaven is a spherical body and every sphere lacks a beginning. And since it lacks a beginning, it also lacks an end; and since it lacks a beginning and an end, it lacks a middle point which is excluded in corporeal substance. There were many causes, but one of them was that the enumeration of the signs began with Aries because the circle of the signs intersects the circle of the equator[2] at the beginning of Aries and at the point opposite to it, not at a right angle[3] but obliquely. Thus, six signs are northern and six southern, as is discussed more broadly elsewhere. The part which is northern is stronger than that which is southern, because when the Sun leaves Pisces, it enters Aries, and Aries is the first sign of the northern part. The northern part is more noble and stronger than the southern part. That this is true is not without proof, because all claim this, and no one asserts the contrary; indeed, this is able to be perfectly proved. For this reason the enumeration of

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[1] *Denominatio.* Bonatti uses this term in this chapter to signify enumeration. In the next chapter he uses it in the sense of the naming of things.

[2] *equatoris diei.*

[3] *ortogonaliter.*

the signs begins from Aries, because the stronger part of the zodiac begins from the beginning of Aries.

Another reason why the enumeration of the signs began from Aries. Another cause is that, when the Sun enters Aries, the days begin to become longer than the nights;[1] whence, since increase is a noble thing, the wise of this art were agreed that the enumeration of the signs ought to begin with the one in which the increase begins.

Another reason why the enumeration of the signs began from Aries. Another reason why the enumeration of the signs begins with Aries is that although the four qualities which are hot, cold, dry, and humid are simple, and while they are simple, they cannot be increased nor decreased, when they are composed as hot and humid, cold and dry, hot and dry, cold and humid, then certain of them signify an effect and increase, while others signify corruption and diminution; whence it was better for taking the beginning from Aries than from another sign, because when the Sun enters Aries, then things begin to be effected and be increased, and since effect and increase are more noble things and friendly to nature, and defect and decrease are ignoble and unfriendly to nature, the enumeration of the signs was rightly taken from Aries, because then things grow tender and this quality is assimilated to youth, which is the most potent part of life; so indeed this is the most potent part of time, when the aforesaid things happen, because the Sun recedes then from the equator, approaches the northerly regions, and causes heat in the humidity which was produced by the preceding wintertime. Then nature is moved to generation and the increase of things; the herbs grow and the trees put forth branches, and these flower and put forth fruit, and many seeds germinate. This does not happen in other times of the year unless by chance and by accident. Properly, therefore, the enumeration of the signs begins from Aries rather than from any other sign.

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[1] The length of the days begins to increase at the Winter Solstice, 0° Capricorn, but it is not until the Sun gets to Aries that the length of the day gets to be longer than that of the night.

Why the Signs Were Named with These Names. Chapter VII.

It has been said above why the enumeration of the signs ought to begin from Aries. Now however, it ought to be said why the signs are named by these names. There are many causes, one of which is that in these places which are called signs, there are stars so disposed and arranged that if a line be drawn from one to the other, a given figure would result resembling the name of the sign.[1] It is said that Ptolemy went due south so far that he was under the equator, and that he stood there so long because he saw all these things.[2]

There is another cause why the signs are named with such names, namely that when the Sun enters Aries, heat is increased because the Sun begins to be elongated from the equinoctial line and approaches the zenith of the northern regions and is fortified, so that Aries is said to have strengths with respect to the animal powers.[3] Thence is heat increased and made stronger than it was when the Sun was in Aries; and it is assimilated to the nature of Taurus, since Taurus is a stronger animal than the Ram, and the declination of than Sun from the equator and its nearness to the zenith of the northern region is greater than when it was in Aries. Then the Sun enters Gemini; and that sign is called Gemini because then the heat is doubled[4] and doubled beyond what it first was. Then it reaches its furthest elongation from the equator and its highest point over the head.

From this point the Sun begins to return towards the equator, and then it enters Cancer because Cancer is an animal which goes backwards. Whence just as a crab is said to go sometimes forward and later backward, so, when the Sun is elongated from the equinoctial line to its furthest elongation, from there it returns towards it, and then it is said to go back as a crab goes. After the Sun leaves Cancer, it enters Leo; it is said to be in the Lion because the heat is increased and

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[1] The previous arguments were all perfectly in accord with the reasoning of a tropical zodiac. This argument favors a sidereal one. [RH]

[2] *Et dicitur quod Ptolemæus ivit versus meridiem tantum, quod fuit sub æquatore, et stetit ibi tantum, quod vidit omnia haec.*

[3] Here we have another argument that supports a tropical model. [RH]

[4] Play on words, "Gemini," the constellation of the Twins, and *geminare* 'to double'.

becomes stronger, sharper, and more unyielding on account of the impurity of the air and because it lacks humidity. Whence, because the Lion is an unyielding animal, strong and rough, it was especially apt to name this sign with the name of this animal. After this, the heat slackens and there is no increase of things nor an ordered generation besides the germination of certain seeds; and that sign is called Virgo because a virgin is an humble and sterile animal[1] and everything tends to diminution and almost to sterility.

Then the Sun enters Libra, because then the days are equal to the nights and the heat is lessened [yet further], so that there is an equality of heat and cold; because then the cold begins to become stronger, and all things are in equality at this time. Then the Sun enters the Scorpion and the cold is increased above the heat. Things become somewhat cold and somewhat warm. The air is made distemperate and there are rains. Grievous ills are generated, pestilences and death-bearing things as deadly as poisons and the like. For this reason, this sign was named for the poisonous scorpion. Then the cold increases yet further beyond the heat and the Sun is said to enter Sagittarius. Here occur mutations of the air. The air becomes cold, and very cold frost-bearing winds arise and snows and ice born on the wind like arrows slaying animals and vegetables.

Then the cold is increased beyond the heat; it is as if heat were killed, and the air turns to a frigid distemperance and becomes melancholic; and snows increase and the greatest cold and ice and the like. Whence, since the Goat is a cold, dry, and melancholic animal, this sign was named Capricorn for that animal. The Sun has now its greatest southerly declination from the equator. From thence it turns again toward the equator, the cold is lessened, and occasionally rains come in the place of snows, the air is made more humid; whence the next sign is named from such a disposition of the air flourishing at that time.[2] Then the Sun enters Pisces, and the sign was named for the fish, which is a watery animal, because at this time rains abound more than at other times of the year (except sometimes by chance); and if there are sometimes snows or frosts or ice, they are more quickly changed into water than at other times of the winter.

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[1] Bonatti obviously does not restrict the term 'virgin' to humans. [RH]

[2] He does not specifically name the sign Aquarius or Water Bearer.

Here Begins the Second Part of the Second Tractate on the Essential Being[1] of the Circle.[2]

On the Division of the Orb of the Signs into Twelve Signs and of Each Sign into Thirty Degrees and of Each Degree into Sixty Minutes and of Each Minute into Sixty Seconds. Chapter I.

In the things which have already been said in this tractate many things have been shown that seem to be and are useful to this work, especially regarding the number of the signs, their arrangement, and their division. In this chapter the division of the orb of the signs ought to be discussed following the footsteps of our most reverend predecessor Ptolemy and of those who must be honored, Albumazar, Alezdegoz, Massala, Alchabitius, Adila, Alhayat, Thebit, Astaphan, Arastellus, and the other prudent men who studied in this science: adding those things which will seem useful to me according to the grace of composition which God may grant me and return to my memory for me.

You ought to know that the circle of the signs which is called the Zodiac or Zodial is divided into twelve equal divisions, each of which is called a sign; and the signs were named (as was said above) after the likenesses of the animals which are formed as I told you. The first sign therefore is called Aries, the second is Taurus, the third is Gemini, the fourth Cancer, the fifth is Leo, the sixth is Virgo, the seventh is Libra, the eighth is Scorpio, the ninth is Sagittarius, the tenth is Capricorn, the eleventh is Aquarius, and the twelfth is Pisces. Each of these signs is divided into thirty equal parts, each of which is called a degree. Each degree is divided into sixty equal parts, each of which is called a minute. Each minute is divided into sixty equal parts, each of which is called a second. Each second is divided into sixty equal parts each of which is called a third. Each third is divided into sixty equal parts, each of which is called a fourth, and so on all the way to the end of

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[1] *esse.*

[2] The layout of this chapter and the way it opens, so like the beginning of the First Part of the Second Tractate, suggests that Bonatti wrote two introductory chapters or that one or the other was an afterthought.

numbers.[1] In practice, however, this will suffice in the work you do, especially in equations of some numbers beyond these,[2] although some of the Order of Preachers divided all the way to fifths and sixths so that, by not philosophizing, they seem to apply themselves to philosophy.

For Showing What Signs are Northern and What Southern. Chapter II.

It has been said above that the signs are twelve and in how many parts each sign is divided. Now it ought to be said which of them are northern and how many [they are] and which are southern. The northern signs are those six which are from the beginning of Aries all the way to the end of Virgo, to wit, Aries, Taurus, Gemini, Cancer, Leo, and Virgo. They are called northern because they are on the northern side of the equator. The remaining six are those which are from the beginning of Libra to the end of Pisces. These are called southern because they are on the southern side of the equator.

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[1] This is a completely sexagesimal system, which contrasts with the modern practice of going as far as seconds and then using decimal seconds. [RH]

[2] A minute is a 60th of a degree. A second is a 60th of a minute and a 3600th of a degree. A third is a 60th of a second, a 3600th of a minute and a 216,000th of a degree. What need therefore to pretend to calculate to a fifth which is a 12,960,000th of a degree, and still less to a sixth (1/777,600,000th of a degree)?

Which Signs are of Direct Ascension[1] and Which are of Crooked Ascension[2]. Chapter III.

It has been said which signs are northern and which are southern. Now it ought to be said which signs are of direct and which signs are of crooked ascension. Those of direct ascension are the six which are from the beginning of Cancer to the end of Sagittarius.[3] They are called signs of direct ascension because they ascend perpendicularly and in a longer time than those opposite them. The remaining six signs, those from the beginning of Capricorn to the end of Gemini, are called signs of crooked ascension because they do not ascend so directly as do those mentioned above which are opposed to them. They are called signs of crooked ascension because they ascend crookedly and in a shorter time than those which oppose them. The signs of crooked ascension are Capricorn, Aquarius, Pisces, Aries, Taurus, and Gemini. Each sign ought to rise in two equal hours. But the signs of direct ascension rise in more than two hours and the signs of crooked ascension in less than two hours.

The Signs Which are Obeying Signs. Alchabitius said that those that rise crookedly obey the signs of direct ascension[4] namely two signs which

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[1] *directæ ascensionis.* Literally, 'perpendicular'. The signs of "direct ascension" are signs of long ascension. The terms 'tortuous' or 'crooked ascension' sound as if such signs rise slowly or crookedly, but they are in fact signs of short ascension. The signs of long ascension are from the beginning of Cancer to the end of Sagittarius. Those of short ascension are from the beginning of Capricorn to the end of Gemini. Bonatti goes on to say that the signs of direct ascension rise more slowly than those of tortuous ascension.

[2] *tortuosæ [ascensionis].*

[3] See page 55, note 1.

[4] In other words, in Bonatti's somewhat deviant opinion the signs of short ascension are obedient and those of long ascension are commanding. The usual correspondence is that the commanding signs are Aries, Taurus, Gemini, Cancer, Leo, Virgo and the obeying Signs are Libra, Scorpio, Sagittarius, Capricorn, Aquarius and Pisces. Bonatti's arrangement, which he tells us comes from Alchabitius, equates the terms "commanding" and "obeying" with what are usually called the antiscia. *Cf. Ancient Astrology: Theory and Practice, The Mathesis of Firmicus Maternus,* translated by Jean Rhys Bram, Park Ridge, NJ:

were of the same longitude from the beginning of Cancer. That which ascends crookedly obeys that which ascends directly. Thus Gemini obeys Cancer, because the end of Gemini and the beginning of Cancer are equidistant from the equator, as are the end of Cancer and the beginning of Gemini. For the same reason Taurus is said to obey Leo; and Aries to Virgo, Pisces to Libra, Aquarius to Scorpio and Capricorn to Sagittarius. The same philosopher also said that two signs which were of the same longitude from the beginning of Aries are called "harmonious in journeys," such as Aries and Pisces. For the end of Aries is as distant from the equator as the beginning of Pisces;[1] as the end of Taurus, so the beginning of Aquarius; as the end of Gemini, so the beginning of Capricorn; as the end of Cancer, so the beginning of Sagittarius; as the end of Leo, so the beginning of Scorpio; and as the of Virgo, so the beginning of Libra.[2]

There is another manner of dividing between the ascensions of the signs according to the two halves of the circle of the signs. And they say that some signs are greater than others opposite to them; not that one sign may be greater than another or longer in its own circle, but that it takes more time in rising than its opposite and they set in less time. And they begin from Leo, which is the sign of the Sun; and it is called the greater half. And it is also called the Sun's half from the beginning of Leo all the way to the end of Capricorn. The Sun has in all this half such virtue as the other five planets have in their terms.[3]

Noyes Press, 1975. pp. 58-68.

[1] But in opposite directions. [RH]

[2] This correspondence is also found in Albiruni. *Cf. The Book of Instruction in the Elements of the Art of Astrology,* by Abu'l-Rayhan Muhammad ibn Ahmad Al-Biruni, translated by R. Ramsay Wright, London: Luzac and Co. 1934, p. 227/section 377.

[3] This point is very important from the standpoint of neo-traditional astrology, the dignity of term is unbalanced in favor of the starry planets (the planets other than the Sun and Moon) because the Sun and Moon have no terms. However, this line tells us that the Sun and Moon should get the same dignity for being in their respective zodiacal halves as the starry planets do in their terms. Astrologers who give two points of dignity for a planet in its term might also consider giving the Sun and Moon two points of dignity for being in their proper half.

In any case Bonatti is incorrect when he relates this to the issue of signs in the solar half having longer ascensions than those of the lunar half. This

The remaining half, however, from the beginning of Aquarius to the end of Cancer, is called the lesser half; not that it is smaller than the other half, but that it ascends in less time than the other half, which is opposite to it, and sets in a greater time according to the diversity of climates and regions.[1] It is called the Moon's half because the Moon has in all that half such virtue as the five other planets have in their terms, on account of the many impressions and effects which it has on us more than the five planets have.[2] And this was the cause that the terms were not assigned to the Sun or Moon in the signs as they were assigned to the five planets. We will discuss this further below when we speak on the terms of the planets.

The half of the circle which is from the beginning of Aries to the end of Virgo is called the hot half, and the other half, namely from the beginning of Libra to the end of Pisces, is called the cold half. The quarter from the beginning of Aries to the end of Gemini is called hot, humid, vernal, childish, sanguine, and signifies childish ages all the way to youth. The quarter from the beginning of Cancer to the end of Virgo is called hot, dry, summery, choleric, and juvenile. It signifies youth all the way to its completion, namely to the beginning of middle age. The quarter which is from the beginning of Libra to the end of Sagittarius is called cold, dry, autumnal, melancholic, and signifies middle age all the way to the beginning of old age. The last quarter which is from the beginning of Capricorn to the end of Pisces is called frigid, humid, wintery, phlegmatic, senile, and defective. It signifies old age and senility all the way to the end of the natural life.

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would be true only if the solstice points were at 0° Leo and 0° Aquarius, rather than at 0° Cancer and 0° Capricorn.

It is interesting that Bonatti has such a mastery of Scholastic natural philosophy and yet is weak in some aspects of astronomy. [RH]

[1] This is the same error again regarding long and short ascension. [RH]

[2] In other words each of the luminaries is so much stronger than all the other planets that if all the planets' force were added up it would be equal to the Moon or the Sun's force in their respective halves.

On the Order of the Circles of the Seven Planets and Their Disposition and Courses and in What Times They Complete Their Courses. Chapter IIII.

In this chapter I will tell you what the philosophers say and is true regarding the order of the circles of the planets. The first of these circles, higher, superior, and closer to the orb of the signs [than the others] is the circle of Saturn; next under this, the second, is that of Jupiter; next, the third, is the circle of Mars; the fourth is the circle of the Sun; the fifth is the circle of Venus; the sixth is the circle of Mercury; and the seventh is the circle of the Moon, which is lower and nearer than than all of the others to the earth.

Higher and slower than all of the seven planets in course is Saturn who completes his average course in nearly thirty years. Then comes Jupiter, who completes his course in almost 12 years. Then comes Mars, who completes his course in almost two years. Then the Sun, who completes his circuit in one year. Then Venus, who completes her course in one year like the Sun. Then comes Mercury, who completes his course likewise in one year. Then comes the Moon, who is faster, lower, and closer to the earth than of all the others, who perfects her course in twenty seven, and almost a third of a day.

There are, besides the planets, two places in the sky observed in the circle of the signs. One of these is called Caput Draconis and the other Cauda Draconis. They are two crossing points opposite [each other] which the circle of the Moon makes through the circle of the Sun and they signify certain things which are spoken of below when we treat of the Caput and Cauda.

The Powers[1] which the Planets have in the Signs. Chapter V.

Each of the planets has powers in the signs. Some of them are by nature;[2] some by accident.[3] Those by nature are: house[4], exaltation,

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[1] *potestates.*

[2] Essential dignities. [RH]

[3] Accidental dignities. [RH]

triplicity, term and face. Those by accident are joy, namely, the joys of the planets or when they are in strong houses [signs] or places; and when they are received, i.e., when one [planet] receives another, like the other fortitudes which are spoken of in their own time and place.

On the Houses[1] of the Planets. Chapter VI.

The signs (as has been shown) are 12 and they are assigned as houses to the seven planets. Leo is the house of the Sun, as the philosophers attest. Cancer is the house of the Moon. Gemini and Virgo are the houses of Mercury. Taurus and Libra are the houses of Venus. Aries

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[4] i.e., sign, or rulership. Morinus calls this domicile. Bonatti (with most ancient authors) holds that there are two usages for the word 'house': 1) house as the primary house or what we call sign. These primary houses correspond to such-and-such a division of the Sky or Active Cause; and 2) secondary house as the house of the figure or what we call the first, second, third, fourth houses, etc. which signify areas of life. These secondary houses are determined toward limited effects by their numerical sequence from the Ascendant. Thus the first house signfies life; the second, wealth, etc. In turn, these secondary houses are of tremendous importance in determining the Active Causes signified by the primary houses toward specific, limited effects (as, for instance, when the Universal and Unlimited Active Cause of a given zodiacal sign such as Aries, is determined and limited in its expression by being determined toward second house affairs through accidentally falling out as the second sign from the Ascendant or on the cusp of the second house. Under this circumstance, the nature of Aries is forced to signify financial and monetary matters. By its nature it could cause all sorts of things, but by accidentally becoming the second house, its power is limited to second house affairs. There is a correspondence between the primary and secondary houses but not an equation. The primary houses exist in the sky; the secondary houses are divisions of the earth's atmosphere or aura. For all this, Bonatti still occasionally uses the terms 'house' where we would use 'sign', as will be seen from what follows in the text.

Each of the planets rules at least one house according to rulership or domicile and also has honor by exaltation, triplicity, term, and face, as Bonatti shows.

[1] *assignata pro domibus.* I will leave the word *domus* as 'house' from this point on, assuming that the reader has read page 59,note ?, and knows the difference between primary and secondary houses.

and Scorpio are the houses of Mars. Pisces and Sagittarius are the houses of Jupiter. And Aquarius and Capricorn are the houses of Saturn.

But you should be able to say why the houses of the planets are ordered in this way and why the Sun and the Moon have only one sign[1] each while the other planets have two of them, since the luminaries are seen to have only two [houses],[2] whereas each of the other [planets] have two. This is by reason of their [the luminaries'] strengths. Many reasons are able to be assigned for this, and especially as Albumasar says, the Sun and Moon are stronger and greater than the other fortunes[3]. To this it is able to be responded thus, that among the ancients there was diversity in ordering the houses of the planets. Indeed, some began from the houses of the luminaries, some from the houses of Saturn, some from the signs of Mars, some from the signs of Jupiter, some from the signs of Mercury, some from the signs of Venus. Each assigned his own cause as he saw fit. Nevertheless, I do not see great cogency in their disagreements. Many causes can be assigned, but I do not want to note them all, nor do I want to recite all the opinions of the ancients, because it would be extremely long, nor would there be any use in it.[4] But I will tell you one, and this will be enough for you. One reason why only Leo and no other house was assigned to the Sun as its house is that the Sun is the greater luminary, the diurnal luminary, and it is of light;[5] and it is judged to be hot and dry. Its heat is intense and the virtue of its heat appears to be stronger when it is in Leo than when it is in any other sign;[6] and the nature of the summer heat appears stronger than in other times. The Sun is a masculine, diurnal planet and it signifies heat and dryness by its nature. Leo is a masculine sign, fiery,

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[1] *Quare Sol et Luna habuerunt quilibet eorum unicam domum tantum.*

[2] That is, each luminary has only one house or sign each.

[3] or benefics. 'Fortune' used in this context means 'Benefic'. 'Infortune' means 'malefic'.

[4] We have here a clear indication that Medieval authors edited the tradition passing along only what they thought useful. While this is of practical benefit it also means that certain changes now difficult to appraise due to such editing have occurred in the Western Astrological Tradition. [Additional by RH] At this point in Project Hindsight, our translations have not shown us precisely what Bonatti is referring to here.

[5] perhaps "It is full of light."

[6] *signo*. Here Bonatti uses the word 'sign'.

hot, and dry. When the Sun is in it, then we see the culmination of summer and the completion of the increase of heat. No other sign is so close to the nature of the Sun as Leo. Although Aries and Sagittarius are fiery signs, the heat of the Sun does not appear there so powerfully, nor is its light so clear nor so subtle as it is in Leo. Albumasar says that the Sun and Leo agree in this, namely that the Sun is in the midst of the planets and Leo is in the midst of the summer heat, because that is when the greatest and strongest heat of summer occurs, when the Sun is in Leo.

Why is Cancer the house[1] of the Moon? Only Cancer was assigned to the Moon, which is the nocturnal light, as its house, because Cancer is the first moveable sign from the beginning of the signs which agrees with the Moon in femininity, mobility, coldness and humidity. It is closer to the house of the luminary from which the Moon receives light than any other moveable, cold and humid sign which agrees with the nature of the Moon.[2] And the Moon is called the Lamp[3] of the Sun because it receives light from him, and these two houses[4] are more lucid and more splendid and more harmonious with the natures of the luminaries than all the other houses in all the climates and in all the other regions of the world.[5]

Why are Capricorn and Aquarius the houses of Saturn? Just as the Sun and the Moon are more lucid, splendid and full of light than that of the other supercelestial bodies, and their light is perceived more [than that of the other supercelestial bodies] and is more manifest than the light of any of the others, and [because] they [the luminaries] are increasing of fortune[6], so the obscurity and darkness of Saturn is seen to be more obscure and shadowy than all the other supercelestial bodies; and he is worse than all the other infortunes and is destroying. Whence, since light and splendor are directly contrary to obscurity and darkness

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[1] *domus.*

[2] Actually Cancer is the only moveable, cold and humid sign, period! [RH]

[3] *luminare.* Usually in this work this means 'luminary', but that would make little sense here. [RH]

[4] Leo and Cancer.

[5] *quam aliqua de aliis domibus in omnibus climatibus & in omnibus regionibus de mundo.* It looks to me as though something has crept into the text here.

[6] *fortunae augmentantes.*

and vice versa, and since the luminaries signify splendor, light and clarity, and Saturn signifies obscurity and darkness, it was for this reason that their houses[1] were opposed in a direct line. And this is the reason why Capricorn and Aquarius were assigned to Saturn as his houses. Likewise, Capricorn and Aquarius are dark houses,[2] so that when the Sun is in them, then the air is more obscure and more removed from purity. This is especially so when the Sun is in Aquarius, because then there is the culmination and extreme of coldness in winter.

Why are Sagittarius and Pisces the houses of Jupiter? Sagittarius and Pisces, the houses next to Saturn's, were assigned to Jupiter because Jupiter immediately succeeds Saturn in the order of the circles,[3] and he [Jupiter] is the strong fortune so that he breaks the malice of Saturn. These two signs[4] aspect the houses of the luminaries by a trine aspect, which is the aspect of friendship whole and perfect,[5] just as the opposition is the aspect of ultimate enmity. And on account of this, because he is a fortune, fortunate before all others except the luminaries, it is fitting that its houses should be designated in such places as aspect the houses of the luminaries with an aspect of love instead of any other aspect. Pisces aspects Cancer, which is the house of the nocturnal luminary, from a trine aspect and it is of its triplicity, which increases the goodness of the aspect. And Sagittarius likewise aspects Leo, which is the house of the diurnal luminary, from a trine aspect and it is of its triplicity.

Why are Aries and Scorpio the houses of Mars? Aries and Scorpio were assigned to Mars as its houses, next to Jupiter's houses, because Mars immediately succeeds Jupiter in the order of the circles and is evil and unfortunate;[6] but his malevolence and evil are below the malevolence and malice of Saturn. Those two signs aspect the houses of the luminaries with a square aspect, which is the aspect of moderate

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[1] The houses of the luminaries and those of Saturn.

[2] *domus tenebrosae.*

[3] The Sphere of Jupiter is immediately beneath that of Saturn in Ptolemaic Astronomy.

[4] i.e., Sagittarius and Pisces.

[5] J. B. Morin in *Astrologia Gallica*, Book XXII calls the trine "the aspect of perfect friendship."

[6] *infortunatus.*

enmity.[1] And on account of this, because he is the malefic below Saturn (which signifies ultimate evil), it is fitting that his houses should be assign to such places that aspect the houses of the luminaries with an aspect of moderate enmity. Thus, Aries aspects Cancer, which is the house of the nocturnal luminary, from a square aspect and it is not of its triplicity makes the aspect worse.[2] Scorpio likewise aspects Leo, which is the house of the diurnal luminary with a square aspect.

Why are Taurus and Libra the houses of Venus? Taurus and Libra were assigned to Venus as her houses, next to the houses of Mars, because she succeeds the Sun in the order of the circles for which he has been assigned his own house. For this reason, the houses of Venus follow the houses of Mars. Moreover, Venus is a good fortune but not so outstanding a fortune as Jupiter, because Jupiter is so strong a fortune that it breaks to pieces every evil of the malefics, which Venus is not able to do. But though she is not able to dash to pieces the evils of the others as does Jupiter, she diminishes them as much as she can and by herself confers fortune and good. Her fortune and good are below that of Jupiter. Her two signs aspect the houses of the luminaries from a sextile aspect, which is the aspect of moderate friendship. And because of this because she is a good fortune below Jupiter (who signifies perfect and ultimate goodness and friendship) it is fitting that her houses should be designated in such places that they aspect the houses of the luminaries with an aspect of moderate friendship. Taurus, indeed, aspects Cancer, which is the house of the nocturnal luminary with a sextile aspect, which is an aspect of moderate friendship, although it is not of its triplicity. Libra aspects Leo, which is the house of the diurnal luminary, from the sextile aspect.

Why are Gemini and Virgo the houses of Mercury? Gemini and Virgo, the signs next to the houses of Venus, were assigned to Mercury because he succeeds Venus in the order of the circles and is of mixed nature. By his nature, Mercury is more fortunate than unfortunate, but he is converted to the nature of those to whom he is joined. And this is the reason why he is called of a mixed nature, namely, his houses do not aspect the houses of the luminaries by any aspect, because they are contiguous to them, and because Mercury is not sufficiently far elongated from the Sun to be in any aspect to him. But you can say that

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[1] as opposed to perfect enmity; i.e. the opposition.

[2] . . . *Nec est de ipsius triplicitate quod deteriorat etiam aspectum.*

Gemini aspects Leo and Virgo aspects Cancer. Yet that has no place in such a case, because following this consideration, no sign is said to aspect the house of any luminary from any sign because the house of the other luminary falls within those limits.[1] Whence Gemini does not aspect Leo because Cancer, the house of the Moon, falls within the limits [of the aspect]. Nor is Virgo said to aspect Cancer, because Leo the house of the Sun falls within the limits [of the aspect]. Understand the same concerning the other signs. Aries does not aspect Leo with a trine aspect because Cancer, the house of the Moon, falls in between those limits,[2] and Cancer and Aries aspect each other by a square aspect. Scorpio does not aspect Cancer with a trine aspect because Leo, the house of the Sun, falls within the limits, and Scorpio and Leo aspect each other with a square aspect. Taurus does not aspect Leo with a square aspect because Cancer, the house of the Moon, falls within the limits, and Taurus and Cancer aspect each other with a sextile aspect. Libra does not aspect Cancer with a square aspect since Leo, the house of the Sun, falls within the limits, and Libra and Leo aspect each other with a sextile aspect. You will consider all these things according to the consideration of why the signs were assigned to the planets as houses. It is otherwise in planets being in the signs, as is discussed fully in the

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[1] Bonatti uses the word 'terms' where I have used 'limits', but as he is not talking about the subdivisions of the signs called 'terms'. I have translated the word as limits. [Additional by RH] The principle here is simple. Each planet's sign aspects the nearest house of a luminary. The aspect arc cannot go past one luminary house to the other one.

[2] Bonatti seems to apply the same reasoning to houses as is applied to planets in such concepts as frustration of conjunction or abscission of light in which a third planet falling between two others otherwise seemingly applying to mutual aspect is said to frustrate the conjunction. If its aspect falls between the two, it "cuts off light." [Additional by RH] In addition to these, there is another possible justification for Bonatti's reasoning. We have already seen the division of the zodiac into a solar half, Leo through Capricorn, and a lunar half, Aquarius through Cancer. The aspects that Bonatti considers important are all contained within one or the other of these two halves. But an aspect between Aries and Leo, which would enable a sign of Mars to trine the sign of the Sun and eliminate the negative relationship, is an aspect between a sign in the lunar half, Aries, and one in the solar half, Leo.

chapter on the planets' aspects.[1] Many other causes and opinions of the philosophers can be assigned, but in order to avoid prolixity the above mentioned reason will suffice.

On the Detriments of the Planets. Chapter VII.

The detriment of each planet is said to be the seventh sign from its house, namely that opposite it, and indeed it is called its fall.[2] Thus Libra is opposite Aries and Aries to Libra; Libra is the detriment of Mars and Aries the detriment of Venus. Scorpio is opposite Taurus and is the detriment of Venus. Taurus is opposite Scorpio and is the detriment of Mars. And Sagittarius is opposite Gemini and is the detriment of Mercury. Gemini is opposite Sagittarius and is the detriment of Jupiter. Capricorn is opposite Cancer and is the detriment of the Moon. Cancer is opposite Capricorn and is the detriment of Saturn. Aquarius is opposite Leo and is the detriment of the Sun. Leo is opposite Aquarius and is the detriment of Saturn. Pisces is opposite Virgo and is the detriment of Mercury. Virgo is opposite Pisces and is the detriment of Jupiter. And Alchabitius says that if two signs are the houses of one planet, they are called *concordantia in Almantica*[3], that is, in a circle which is sewn in the middle and bound in a ligature,[4] namely, in a zodiac which appears in a hand-made sphere,[5] because

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[1] The cutting-off effect of aspects across Cancer and Leo that Bonatti discusses does not apply to planets in the signs aspecting each other. [RH]

[2] Actually, this is not so. The fall of a planet is in the sign opposite its exaltation, as Bonatti himself points out in Chapter X of this Tractatus. But Bonatti uses technical terms loosely. For instance, he calls both detriment and fall *descensio*.

[3] Agreeing or harmonizing in the *Almantica*. I do not know this last word *almantica*.

[4] *in ligatura strictus*. [Additional by RH] Actually we do have the identical concept in Greek astrology, *homozōnia*, translated as like-engirdling, two signs ruled by the same planet.

[5] That is in an Armillary Sphere. Such spheres were made by Medieval Arabic astrologers (and later by European astrologers) for instructional purposes. Ptolemy mentions these in *Almagest*, Book V, chapter 1, though he calls it an

where the zodiac crosses over the equator, there the circle is said to be tied; and where it declines away from it towards the south or the north, there it is said to be wide.[1] But Albumasar said that the two signs which are houses of the same planet are said to be *concordantia in itinere*,[2] such as Aries and Scorpio, which are the houses of Mars; Taurus and Libra, which are the houses of Venus; Gemini and Virgo, which are the houses of Mercury; Sagittarius and Pisces, which are the houses of Jupiter; Capricorn and Aquarius, which are the houses of Saturn; and Cancer and Leo, which are the houses of the luminaries.

On the Joys of the Planets according to Dorotheus

Dorotheus said that Saturn rejoices in Aquarius, Jupiter in Sagittarius, Mars in Scorpio, Venus in Taurus, and Mercury in Virgo.[3]

"astrolabe." The Arab astronomers had instruments corresponding to Ptolemy's armillaries and quadrants as well as true astrolabes. The Harranian Sabians seem to have been major suppliers of such precision calibrated brass instruments up until about 1100 C.E.

Mashallah's (c.740-c.815) *De compositione Astrolabii,* for instance, influenced Ibn Ezra's (1089-1164) work on the same theme and ultimately Chaucer's 13th century Middle English work on the subject. Al-Zarqali's (c.1029-1087, also known as Azarquiel) *azafea* was a further development of the same device. Of course Al-Biruni, in his *Tafhim*, devotes a whole chapter to the construction and use of the astrolabe. (See *Early Physics and Astronomy*, Pedersen and Pihl, MacDonald American Elsevier, NY, 1974, p 180. See also Neugebauer's article, "The Early History of the Astrolabe," in *Isis*, 40, 1949, pp. 240-256.) The Antikythera device, reported on in the American Philosophical Society monograph (1960), also seems to suggest that in the Hellenistic Age (and later), the technology existed to manufacture extremely complex and precise brass astronomical and mechanical instruments capable of accurately representing astronomical motions.

[1] *latus.* [Additional by RH] This is the origin of the term 'latitude' which actually means 'width'.

[2] literally, "agreeing on the journey."

[3] This doctrine appears in variant forms in many other references. However, this one has the virtue of sense, because in each joy the planet has more than one major dignity. Saturn has dignity by domicile and triplicity in Aquarius and is of the same sect. Jupiter has dignity by domicile and triplicity in Sagittarius and is also of the same sect. Mars has the same relationships to

On the Exaltations of the Planets.
Chapter VIII.

Albumasar and Alchabitius said that the Sun is exalted in Aries, namely in the nineteenth degree thereof. The Moon is exalted in Taurus, in the third degree thereof. Saturn is exalted in Libra, namely in the twenty-first degree thereof. Jupiter is exalted in Cancer, in the fifteenth degree thereof. Mars is exalted in Capricorn, in the twenty-eighth degree. Venus is exalted in Pisces, namely in the twenty-seventh degree thereof. Mercury is exalted in Virgo, in the fifteenth degree thereof. Caput Draconis is exalted in Gemini, namely in the third degree of that sign. Cauda Draconis is exalted in Sagittarius, namely in the third degree. And Albumasar said that these were said to be the exaltations in the aforesaid degrees because they were in these degrees when they were formed.[1]

Why Aries is the Exaltation of the Sun and Libra is its Descension and Why the Other Signs are the Exaltations of the Other Planets.
Chapter IX.

Albumasar said that Ptolemy, the author of a book of judgments[2] , said that when the Sun enters Aries, it begins to ascend to the north, namely to the zenith of our heads,[3] and then the day increases in length over the night; and then its nature [i.e., the Sun's] begins to increase in heat and especially when it reaches the nineteenth degree of Aries. And when it is in Libra it begins to descend toward the south, receding and distancing itself from the zenith of our heads; and the days shorten and

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Scorpio, and Venus to Taurus. Mercury, however, has dignity by domicile and exaltation in Virgo, so it is slightly different from the other joys. [RH]

[1] This is a reference to one form of the *thema mundi* or birth chart of the world. [RH]

[2] The *Tetrabiblos* is referred to. *Cf.* Book I, Chapter 4 and Book I, Chapter 19. Bonatti is quoting Albumasar, though, who has read Ptolemy, and not Ptolemy directly.

[3] The zenith of any place is directly over one's head. [RH]

night is increased in its length over the day, and then its nature [i.e. the Sun's] begins to diminish in heat, and its noble and useful operations are lessened, especially when it reaches the nineteenth degree of that sign. Albumasar said that he discovered in a book of certain ancients that they posited that Taurus was the exaltation of the Moon because when the Sun is in Aries, which is its exaltation, and the Moon is in Taurus, then there is the [first] appearance of the light of the [New] Moon.[1] And also Taurus is the first sign of the triplicity of the Moon[2] because it immediately follows the sign of the exaltation of the Sun and she [the Moon] is joined to the Sun in her operations. And they [Albumasar's "ancients"] posited that Scorpio was her descension because it is opposite her exaltation. They posited that Libra was the exaltation of Saturn and Aries its descension because Saturn is opposed in nature and operation to the Sun; therefore their exaltations are opposed to each other just as they are opposed to each other[3] as has been said above. They said that Cancer was the exaltation of Jupiter because Jupiter by its nature signifies the north winds; and when Jupiter was in Cancer, the nourishing north winds arise, producing an increase in vegetables, and conforming to the nature of Jupiter. They said that Capricorn, because it is the opposite of Jupiter's exaltation, is its descension. Capricorn, they said, was the exaltation of Mars, because Capricorn is Southern and is opposed to the exaltation of Jupiter, and these [Mars and Jupiter] are mutually inimical, and because the nature of Mars is southern and burning, and the heat of Mars is strengthened when Mars is in Capricorn. They said that Cancer was his descension because it was opposed to his exaltation. They posited that Pisces was the exaltation of Venus because the nature of Pisces is humid, agreeing with the nature of Venus, and then the humidity of the season begins to grow. And they posited Virgo as her descension since it is opposite her exaltation. They posited Virgo as the exaltation of Mercury because from him the dryness of the time of autumn increases and the nature of Mercury is

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[1] This reasoning is to be found in the Tetrabiblos, Book I, chapter 20. [RH]

[2] *Cf Tetrabiblos*, Book I, Chapter 19 where Ptolemy says the Moon is the nocturnal ruler of the Earthy Triplicity. Note that Bonatti is still quoting Albumasar. Yet the text closely follows Ptolemy, *Tetrabiblos*, Book I, Chapter 19. Thus, Bonatti clearly does not recognize that the "ancients" whom Albumasar quotes is Ptolemy.

[3] That is, their signs are opposed to each other.

referred to dryness, unless by accident.[1] And when it is in Virgo, its dryness was strengthened. They posited Pisces as its descension because it is opposite to its exaltation. They posited Gemini as the exaltation of Caput Draconis because Gemini is the first bicorporeal and common sign after Aries, and Caput Draconis is likewise bicorporeal because it is composed of two natures, namely of Jupiter and Venus, which are the two fortunes. Sagittarius is posited as the exaltation of Cauda Draconis because Sagittarius is opposed to Gemini, as Cauda is to Caput Draconis.

On the Fall or Descension of the Planets. Chapter X.

Albumasar and Alchabitius said that every seventh sign from the exaltation of any planet is its descension or fall. For the Sun falls in the nineteenth degree of Libra, just as he is exalted in the same degree in Aries. The Moon falls in Scorpio, just as she is exalted in Taurus, and in the same degree. Saturn falls or descends in Aries, just as he is exalted in Libra, and in the same degree. Jupiter falls or descends in Capricorn, just as he is exalted in Cancer, and in the same degree. Mars falls or descends in Cancer, just as he is exalted in Capricorn, and in the same degree. Venus falls or descends in Virgo, just as she is exalted in Pisces, and in the same degree. Mercury falls or descends in Pisces, just as he is exalted in Virgo and in the same degree. Caput Draconis falls in Sagittarius, and Cauda Draconis in Gemini. And there is a difference between fall and descension, although they can sometimes be reversed, for fall is properly so called from sign, while descension is from exaltation. [Dignity by] house is likened to one's own proper business, while [dignity by] exaltation is likened to honors or dignities, as much as those coming from strange or unusual sources as [those coming from] inheritances.[2]

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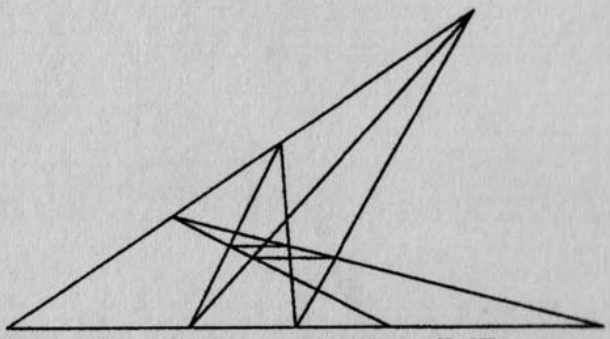
[1] Mercury is dry unless an "accident", i.e., circumstantial connection with a sign or planet, alters it. [RH]

[2] Putting this in more modern terms with less ambiguity, detriment is likened to problems in one's own proper business, while honor of domicile is one's proper business. Exaltation is likened to honors or dignities already coming from strange or unusual sources without effort, such as inheritances.

The End of Volume I of the Project Hindsight Edition of Bonatti's *Liber Astronomiae.*

Fall is the privation of these things.



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